



Impact Report 2023

We believe people's sight matters

At Moorfields Eye Charity, we support pioneering eye health and the life-changing work of the highly successful partnership between Moorfields Eye Hospital NHS Foundation Trust (Moorfields) and the UCL Institute of Ophthalmology (UCL). This increases our understanding of eye conditions, speeds up diagnoses and brings new treatments to people with sight loss.

One in five of us will live with sight loss in our lifetime. The number of people in the UK with sight loss is set to increase dramatically in the future. By 2050, it will double to over four million [1].

That's why we support innovation in research and patient care and the sharing of knowledge. And it's why we're a partner in realising Oriel, the centre for advancing eye health opening in 2027, helping to save people's sight in the UK and around the world.



Mission

Improving eye health by funding innovation in research, education and care to benefit Moorfields' patients



Vision

Moorfields Eye Charity's support enables Moorfields and UCL to provide world-leading eye care, research and education from the Oriel centre, benefitting patients across the UK and globally



Strategy 2021-27

Our six-year strategy outlines our ambitious objectives for the charity and our role supporting the work of Moorfields and UCL to benefit patients and their families at Moorfields and beyond

Our strategy outlines five main objectives to: Create a world-class Be the leading integrated centre for charity for research advancing eye health, into eye health teaching and research in 2027 Support innovation Support sharing in patient care, of knowledge and enhancing the patient development of experience people's expertise Shape national policy to increase resources allocated to eye health



Moorfields and UCL are driving forward innovations in research and patient care which impact not just how eye health is delivered but other NHS services too, to tackle current health challenges and prepare for the future. We're proud to support this world-leading partnership. With Oriel, the new eye care, research and education centre, now a reality and the opening on the horizon, it's an exciting time for the Oriel partners as construction starts.

This impact report represents our work in the financial year to 31 March 2023. Over the last year, we've awarded over £6 million in grants to support research, innovation in patient care and training at Moorfields and UCL.

Significant milestones have been achieved with Oriel and more philanthropic commitments made which are making Oriel possible. We're so grateful for the generosity of our donors. NHS and government final approval has been secured and the contract was signed with

developers Bouygues UK.

Thanks to your support, we've seen advancements in research we're funding on corneal disease, how machine learning is transforming treatment of macular degeneration, changes to paediatric pathways working with GPs in the community and the impact of our innovation grants. We also feature patients whose lives have been transformed, and are supporters of the charity. We continue to fund researchers at different stages of their careers. We're very

proud of their achievements with advancements in research and prestigious roles in the scientific community.

We're also very pleased to have received government funding which enables us to sustain our investment in early career researchers and help build strong foundations for their work.

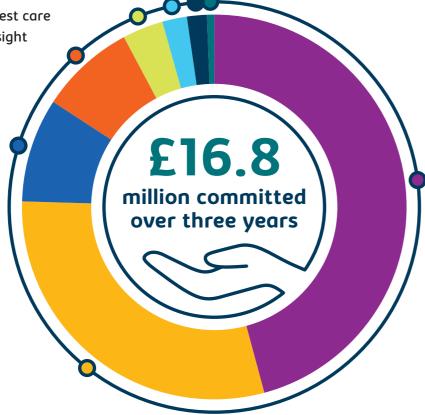
Thank you to everyone who, through the charity, supports the work of researchers and clinicians, changing the lives of people with sight loss in the UK and globally.

Our achievements

Moorfields and its academic partner UCL have an international reputation for research into eye conditions. They are responsible for delivering some of the most important breakthroughs and discoveries in ophthalmology and for training eye specialists including clinicians from around the world.

This research translates into the best care and treatments for patients with sight loss and the setting of the highest standards globally.

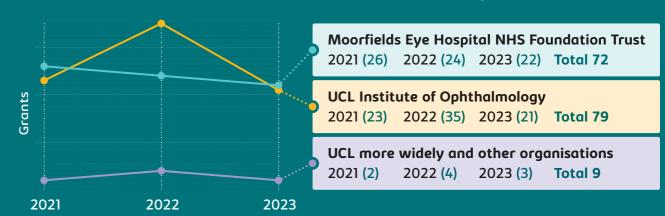
Moorfields Eye Charity supports this unique partnership as the main fundraising and grant-making charity, and is a partner with Moorfields and UCL in realising Oriel – the new integrated centre for advancing eye health opening in 2027.



	2021	2022	2023	Total
Pre-clinical research	£1,863,429	£3,925,132	£1,911,994	£7,700,555
Translational research	£1,126,222	£516,417	£3,342,215	£4,984,854
Multi-user equipment	£839,001	£264,099	£365,522	£1,468,622
Clinical trials		£1,347,660		£1,347,660
O Patient experience	£28,282	£118,759	£429,819	£576,860
Staff welfare	£191,692	£18,112	£137,500	£347,304
Technology and innovation	£102,984		£177,678	£280,662
Education and training	£14,043	£63,156	£24,884	£102,083

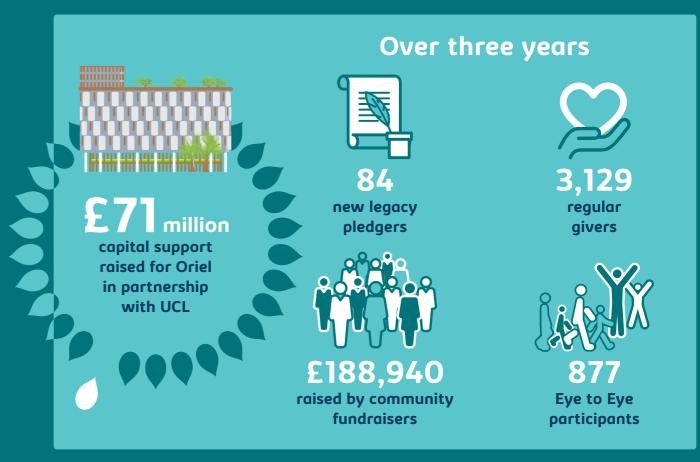
Grand Total: £16,808,599

160 grants awarded in last three years



£31.7 million income raised over last three years*





Oriel

Objective 1: Creating a world class integrated facility

We're working in partnership with Moorfields and UCL to create Oriel, a new world class integrated centre for advancing clinical care, teaching and research, opening in 2027

Oriel, the new state-of-the-art eye centre will harness the expertise of Moorfields and UCL under one roof and enable closer collaborative working between clinicians and researchers, to speed up delivery of the highest quality treatments for patients at Moorfields and worldwide.

The joint initiative between Moorfields Eye Hospital NHS Foundation Trust, the UCL Institute of Ophthalmology and Moorfields Eye Charity will see a brand new centre for eye care, research and education built on part of the St Pancras Hospital site in Camden, London.

We're working in partnership with our generous donors because philanthropy is key to the development of Oriel and vital to achieving our ambitions.

Key milestones reached

Significant milestones have been achieved over the past year. Following Camden Council granting full planning permission in August 2022, the NHS and government gave final approval for the centre in November 2022.

The two-acre site earmarked for Oriel owned by Camden and Islington NHS Foundation Trust was acquired by Moorfields in February 2023 through a NHS-to-NHS transaction approved by the Secretary of State for Health and Social Care. And a £300 million contract was awarded to Bouygues UK in February 2023 to build Oriel.

This is a moment of celebration for all the Oriel partners and everyone involved. We are particularly grateful for the generosity of donors in supporting our vision to make this new centre a reality.

Bouygues UK is on site and demolition is underway as construction starts in 2023.

Philanthropy

The charity, in partnership with UCL, is committed to raising over £100 million. The campaign has raised over £71 million in capital commitments to date.

A huge thank you to everyone who is so generously supporting this centre which will transform people's lives. Please get in touch with us to find out more about supporting and playing an important role in creating this global landmark.

Patient and community engagement

This innovative building will be an exemplar for accessibility, tailored to the needs of patients and other users, and designed flexibly with patients at the heart of it. Designs are tested with patients, strategic partners and staff.



Images: architectural impressions, courtesy of AECOM / Penoyre & Prasad / White Arkitekter

The new centre will provide much more opportunity for people to connect, to be more inclusive so they can get from a clinic to a pharmacy to transport – a whole range of things that they may need to do in a hospital. I hope this will contribute to reducing waiting times. The key driver for me is to improve patient experience.

Emily Brothers, Moorfields' patient and Oriel patient advisory group chair

The new centre will be located in the heart of the Knowledge Quarter, an internationally renowned hub for science and innovation. It's close to the UCL Bloomsbury campus and several of our NHS, commercial and charity partners.

We're engaging with local people throughout the process. The Oriel partners, Bouygues UK and Camden Council are working together to unlock training and employment opportunities to create a lasting legacy in the local community.



What's next and the opening

We're now in the construction stage of the project for this 10-storey, 47,000 square metre centre.

In the months and years ahead, there will be events for the local community, donors and other stakeholders.

We believe the new centre will provide patients, who are at the heart of everything we do, with the best treatments faster, and outstanding patient care. It will benefit people living with sight loss throughout the UK and across the world.

We look forward to Oriel opening its doors in 2027.

Site visits and

Construction engagement showcase
Demolition starts 2023 - 2027 2023 - 2027

Breaking ground Design showcase Donor and prospective donor engagement 2023 - 2027



What's your connection to Moorfields?

Our founder, Michael Uren, was passionate about eye heath. He enthusiastically supported Moorfields' and UCL's London Project to Cure Blindness. This ground-breaking research to find a cure for macular degeneration has helped to restore some patients' sight and we're very proud to continue this support.

Why do you think it's so important to support Oriel?

Oriel will address future eye health challenges with increasing demand, and by connecting researchers and clinicians more closely, patients will get the best treatments possible.

What are you most excited about for Oriel and the future of eye health?

We're very pleased to support Moorfields Eye Charity in creating this world-leading centre for research and treatment of eye disease in the UK, and for them to share their results internationally, for the benefit of all.

The Michael Uren Foundation has committed £15 million to support Oriel.



Preparing for relocation

Research 11

Objective 2: Be the leading charity for research into eye health

Moorfields Eye Charity supports the pioneering work of Moorfields and UCL to make new discoveries, and turn new knowledge into treatments to improve eye health and outcomes, for patients of Moorfields and people globally. We collaborate with other funders to maximise research funding for eye health.



£5,431,886 funding awarded to research projects over the last year



research projects funded over the last year



New approaches to restoring sight

Saj Ahmad's move to Moorfields in 2016 was key for the hospital and for corneal research. The charity's support was critical in enabling Moorfields Eye Hospital to make this key recruitment. We're delighted to support Saj's research programme across a number of grant funding initiatives.

A key priority of his research has been to take existing work on lab-grown corneal cells further. He aimed to make strides towards translating this approach from the laboratory into the clinic – where it could offer new and better treatment options for patients with conditions affecting their cornea.

Cornea transplants

Both a wide range of eye conditions and trauma to the eye itself (for example, as a result of acid attacks) can affect the health of our cornea. One part of the cornea which is commonly damaged is the inner lining of cells (the endothelium).

While corneal endothelial failure is traditionally treated through a wholesale corneal transplant, recent advances in surgery have allowed clinicians to transplant just the endothelial layer. This new approach shows lower rejection rates, faster recovery and better outcomes for patients than transplanting the whole cornea.

However, the tools and skills to perform endothelial transplants are expensive and in short supply. What's more, there is a global shortage of donor corneas for transplantation.

Saj therefore set out to better understand how we can grow corneal endothelial cells in the lab, in the hope that lab-grown cells could one day be transplanted into patients — offering a powerful new treatment option that's not dependent on finding a corneal donor!



£387,578
invested in corneal /
surface of the eye
research in last 3 years



The inner lining of cells (the endothelium) is the driver of around 40% of all corneal transplants in the UK



Demand for donor corneas for transplantation is outstripping availability by around 70 times.

Growing corneal cells

Growing corneal endothelial cells in the lab is notoriously difficult, and Saj's work under the charity's research support made several new and exciting discoveries which have contributed to progression in this area.

First, his team discovered that the extracellular matrix is important for optimising the growth of corneal endothelial cells in the lab, thanks to the presence of specific proteins and growth factors – 20 of which were found to be unique to the corneal endothelium.

By growing donor cells from older people on this extracellular matrix, the team were successfully able to grow and then isolate corneal endothelial cells in the lab, offering new promise to the vision of growing these cells for transplantation into patients in the future.

Saj's team also explored the role of extracellular sacs (called exosomes) in the growth of these endothelial cells. They found, for the first time, that these exosomes actually inhibit the growth of

corneal endothelial cells, since when these exosomes were added the cells grew more slowly and died at a greater rate than when they were not present.

Looking deeper at why this might be, they discovered 13 molecules (microRNAs) that specifically slow the growth of these cells and encourage cell death, which offers a new understanding of why these cells are so tricky to grow and maintain in the lab, and may help scientists to grow them more easily in the future.

This research could have a huge global clinical impact. Growing corneal endothelial cells in the lab would mean that one donated cornea could be used to treat many patients, reducing the worldwide shortage of human donor corneas and lowering the number of patients waiting for a corneal transplant.

Saj Ahmad, Consultant ophthalmic surgeon, Moorfields Eye Hospital

What next?

After such an exciting and fruitful programme of work, Saj and his team are keen to keep working on understanding how we can best grow human corneal endothelial cells in the lab and hopefully one day offer patients a new treatment option to help protect their vision.

Predicting treatment outcomes with Al

Dr Konstantinos Balaskas, director, Moorfields Image Reading Centre, was granted a springboard award by the charity to pilot a machine learning tool that could help clinicians better predict how patients with age-related macular degeneration (AMD) would respond to different treatment options.

What is macular degeneration?

Macular degeneration is a common eye condition where cells in the middle of the retina (the light-sensitive layer at the back of your eye) die or are damaged, making it difficult to see fine details clearly.

The most common form of macular disease is age-related macular degeneration (AMD), which generally affects people over 50.

AMD is the main cause of vision loss in the UK, and although there are effective treatments in the form of eye injections, there are many factors affecting how well patients respond to these treatments. For example, clinical information about

the patient (such as their age or their current vision), imaging tests (such as Optical Coherence Tomography scans) and the genetic makeup of each patient all play a role. However, we don't yet understand how to bring all this complex information together to predict which treatment option an individual patient will respond best to.

Dr Balaskas used new advances in artificial intelligence (AI) and machine learning to help make sense of all this data and support clinicians in making their decisions. His team collected clinical and imaging information from Moorfields

patients with neovascular AMD (nAMD), and also did genetic testing on each patient. All this data was then passed to a new machine learning tool they'd developed, which predicted how patients might respond to different treatment options.



This project was a pilot, and it helped show that machine learning can integrate and interpret many different forms of patient data. This could lead to exciting new insights into how diseases develop and allow us to personalise patient care based on an Al's predictions of how patients are likely to respond to treatment.

Dr Konstantinos Balaskas, Director, Moorfields Image Reading Centre

What next?

The research team behind this project are now looking to develop a comprehensive artificial intelligence pipeline. They plan for this pipeline to help diagnose a far wider range of eye conditions beyond nAMD (with a focus on commonly occurring eye conditions) and ultimately allow doctors to personalise treatment so it's tailored to the needs of each individual patient.

Patient and supporter profiles

Julia Watling-Stewart

What's your connection to Moorfields?

I've been a patient on and off since the end of 1963. I was first referred to Moorfields as a child: I started suffering from double vision after having measles followed by chicken pox. I was then diagnosed with late onset keratoconus in 1985 and have been receiving treatment at Moorfields ever since.

What does Moorfields mean to you?

If it wasn't for Moorfields, I would be a recluse – because without the treatment I've received from Moorfields, I wouldn't be able to see.



Why is it so important to you for the charity to be investing in research?

My personal challenge is that, due to my keratoconus, I have to wear two pairs of lenses to help me see. They don't always fit well, they can slip, and they are quite expensive. I'm not a candidate for a corneal transplant either, so research into developing a new material for contact lenses could be life changing for me. Of course, from a wider and longer-term perspective, Alison Hardcastle's research into the possible genetic causes of keratoconus is also vital!

Julia has been a patient at Moorfields Eye Hospital for almost 60 years and has left the charity a gift in her will.

Danny Laycock

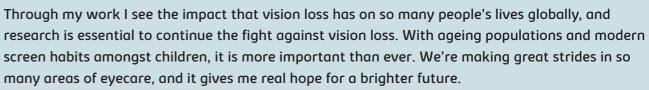
What's your connection to Moorfields?

My connection to Moorfields is a little different as I am not a patient. I recruit within the ophthalmology and eyecare industry. I partner with innovative companies who aim to combat eye disease and this year, to contribute more actively, I'm partnering with Moorfields Eye Charity to raise money and awareness.

What does Moorfields mean to you?

Moorfields is amazing: it's at the forefront of patient treatment, and not only in the UK. It's a globally recognised institution with professionals all over the world aspiring to train there.

Why is it important to you for the charity to be investing in research?



Danny took part in a month of running challenges to fundraise for Moorfields Eye Charity.





We support the development and wellbeing of Moorfields staff, the delivery of outstanding and safe patient care and the patient experience. And we fund innovative equipment, facilities and initiatives for improved diagnosis, treatment and patient wellbeing.

Amount invested in innovations in patient care over the last three years

- Technology and innovation £280,662
- Patient £576,860
- O Clinical trials £1,347,660

Supporting GPs in children's eye health

Then director of the children's service at Moorfields, Dr Annegret Dahlmann-Noor, was awarded an innovation grant from the charity to find new and forward-looking ways to deliver eye care to children following learnings from clinical services post pandemic.

During the lockdowns of 2020 and 2021, Moorfields simply couldn't see many of the children that they'd usually assess and treat in person – but it was still critical that these children received the eye care they required to protect their health and vision.

So, the Moorfields children's service began carefully reviewing cases to prioritise seeing the most urgent ones – and giving advice and guidance to local GPs and optometrists on how to treat lower-risk cases in the community. This removed the need for many children to come to hospital.

New options for patients

Given the benefits to patients, parents and Moorfields Eye Hospital, Dr Dahlmann-Noor saw this improvement in eye care and treatment being delivered in the community as a real success story to come out of the pandemic. In order to keep it going, she applied for a charity innovation grant to review the success of this initiative, formalise the advice and guidance given to GPs into treatment pathways,

and then look to implement these pathways as widely as possible.

All consultants and associate specialists in the children's service across all network sites developed the original recommendations, which Annegret then took forward. Annegret engaged with a wide range of key stakeholders, and turned the agreed guidance into clear and standardised treatment advice and

pathways for GPs to follow.
Integrating the views and needs of such a wide range of people and organisations initially proved quite tricky, but the results have now been widely endorsed and were just recently published by the North-Central London Clinical Advisory Group. This means that clear guidance and treatment pathways are now in place and available for GPs in this area to refer to.

Expanding eye health support

The hope is that with this new guidance GPs will feel more confident and empowered to treat more children's eye conditions directly in the community. This means better outcomes for children without the hassle and disruptions of coming to hospital when it is unnecessary, and leaves more time for the experts at Moorfields to focus on giving children with complex eye health needs the best possible care.

It took a while, but I think it's amazing that we managed to see this through and get it out there. Once we'd cracked that initial hurdle of reaching a consensus, everyone started saying how useful it was... if this can be useful for GPs and other healthcare providers, and help give them more confidence in seeing and treating children with eye health problems in the community, then the effort will all have been worth it!

Annegret Dahlmann-Noor, Consultant ophthalmologist and then director of the children's service at Moorfields

What's next?

With North-Central London on board, the next step is to engage with other healthcare centres in London, with the aim of further improving this new guidance and seeing it taken up by all six of the Integrated Care Boards that cover the London area. Annegret is also hoping they can repeat the process to create similar guidance for optometrists, who have different supporting needs from GPs given they are already eye specialists!

Patient care

Monitoring eye health with smartphone apps

Many patients with chronic eye conditions need to be closely monitored at all times. This is because it is important to spot any changes in their eye or vision quickly, as unless they are treated, such changes may lead to irreversible sight loss. But attending regular routine hospital appointments is inconvenient for patients and makes it harder for clinicians to prioritise those that most need urgent care to protect their sight.

Researchers are therefore now investigating whether smartphone apps that scan the eye and estimate the risks to the patient's sight could help improve the monitoring of common chronic eye conditions.



Self-monitoring with smartphones

Dr Roxanne Crosby-Nwaobi, lead nurse for research at Moorfields, was awarded an innovation grant to explore whether a smartphone app called RetinaRisk could improve care for patients with diabetic retinopathy - a common complication in patients with high blood sugar levels and the leading cause of sight loss in people aged 20-69. She found that such smartphone

apps were welcomed by patients, since they provided individualised and regular feedback on the current state of their eye conditions at home in an accessible way (using a 'red-amber-green' traffic light scale).

The charity also awarded an innovation grant to Dr Dawn Sim, at the time consultant ophthalmologist at Moorfields, to trial a smartphone app

called AllEye, to help Moorfields patients with macular disease to self-monitor their eye health at home.

Her research found that
AllEye was broadly effective
in raising the alarm when
macular disease worsened and
when treatment was possibly
needed, allowing clinicians
to more quickly identify and
prioritise those patients and
potentially protect their sight.

What next?

Eye care smartphone apps would empower patients to better participate in monitoring and even managing their own care and help clinicians to prioritise those patients who need care urgently. The next steps are to further evaluate these apps, their validity and scope in identifying worsening eye health, before they can be relied upon for routine monitoring of patients with chronic eye conditions.

Patient and supporter profiles

Is'Haaq Jasat

What's your connection to Moorfields?

In 2010, I found out that I had contracted Keratoconus, an eye disease that affects the cornea, resulting in loss of vision. Moorfields Eye Hospital have been treating me throughout my journey to help make my vision better.

What does Moorfields mean to you?

For me, Moorfields is an incredible institution which exists to save eyes and lives. Without Moorfields, I would have suffered a lot more vision loss. I'm sure it means a lot not just to myself but to everyone who has been treated and supported at Moorfields.

Why is it important to you for the charity to be supporting patient care?

Every time I've attended an appointment at Moorfields, they have always been so helpful and caring to my needs. Patient care is at the heart of any healthcare organisation, and the charity's support allows Moorfields to improve and develop its services and work. So I've been doing my part to support the charity with a couple of long-distance sponsored walks!

Is'Haaq completed our 15 mile Eye to Eye walk in 2022 and a sponsored winter marathon walk in 2023, both in aid of Moorfields Eye Charity.

Caroline and Max Levey

What's your connection to Moorfields?

My son developed Congenital Bilateral Ptosis at just three months old. It's a very rare condition in babies, so we must have visited Moorfields almost every month for the first year of Max's life!

Max had his first operation (to temporarily lift his eyelids so he could see) when he was only seven months old. Without that surgery he would probably have lost most or all of his sight. He had a second operation at age two and a final operation aged

eight, and we kept attending Moorfields regularly until Max was around 10 years old.

Thanks to those operations Max's eyesight improved (albeit with glasses) and he is predicted As and Bs in his upcoming A Levels.

What does Moorfields mean to you?

Everything! If it wasn't for Moorfields, who knows what would have happened to Max's sight and how different his life would be.

Why is it important to you for the charity to be supporting patient care?

I was brought up to always say thank you - but just saying 'Thank You' isn't enough. That's why we fundraise for the charity, so it can support the hospital and ensure others can receive the same dedication and care as we did.

Caroline is one of the charity's most engaged supporters: she's walked and volunteered for Eye to Eye, fundraised £1,000s to support our work, and always pops up on our social media!







We support Moorfields and UCL to share their knowledge, and to educate and develop people's expertise.

Our funding provides support for future leaders through the early stages of their career. It can help them get started on their research training through to developing their own independent research programmes and teams.

We also have a strong track record of supporting the developing careers of researchers and sharing of knowledge. The demonstrable impact of our funding on the work of the researchers we support can contribute towards advancing our understanding of eye and vision problems, improving diagnoses and developing more treatments.

Researchers such as Dr Rodrigo Young, studying how genes cause eye development problems, have built on our career development award funding programme to successfully apply for research grants for both him and a member of his lab.

Others have supported larger projects and so developed key new skills that have helped them secure their next research position. These include Heesoon Park who worked on a springboard award in glaucoma, gaining

bioengineering and 3D printing skills and is now a production scientist at the Royal Free Hospital in London. Dr Megan Vaughan also obtained a lecturer position in optometry at Anglia Ruskin University, after her experience in a project looking at diabetic retinopathy led by Dr Emily Patterson, who herself has secured an exciting next role as a retinal imaging specialist at an optical technology company.

£24,848

to support the sharing and dissemination of knowledge over the last year



40%
increase in publications
acknowledging charity
funding over the last
three years

- Our PhD studentship and research training fellowship schemes provide an opportunity for promising students to complete a high quality PhD.
- Our career development awards provide support to help establish independent research careers and build reputation and influence in the field.
- Postdoctoral researchers are funded on our grants, allowing them to continue developing their research experience and building a portfolio of compelling data to underpin their own grant applications in the future.
- Our springboard awards help researchers to develop novel ideas and generate preliminary data, which can allow them to submit larger grant applications and work towards establishing their independence.

Primary research areas for awards over the last three years

Area of work	Total
Macular degeneration (including AMD)	£5,880,294
Genetics/Inherited eye diseases	£2,249,821
Imaging, multi user equipment	£1,942,883
Glaucoma	£823,929
Patient/public involvement, experience	£816,631
Retinal/Vitreo-retinal	£691,057
Paediatrics (research and non-research)	£685,993
Neuro-ophthalmology/optic neuropathies	£675,112
Adnexal/extra-ocular	£577,495
Diabetic Retinopathy	£495,038
Ocular inflammatory disease	£473,642
Corneal/ocular surface disease	£387,578
Staff welfare/support	£366,242
Ocular cancer	£345,440
Service improvement	£243,541
Ocular motility/visual processing	£159,556

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George Saleh, director of simulation training at Moorfields, undertook a four month sabbatical to further his previous research and clinical work and have dedicated time to consolidate and advance his areas of interest. The charity supported this activity by ensuring that his clinical service role was supported by a colleague to ensure continuity of care.

During his sabbatical he focused on two key areas: improving access to surgical training simulators, and piloting a new AI tool that could support medical teams during surgical operations.

More important than ever

Virtual reality training has been shown to lead to better surgical outcomes, so one of George's aims was to broaden the number and range of surgeons that could access surgical simulators for training opportunities.

Unfortunately, he had just started his sabbatical when the Covid-19 pandemic hit. With many of his colleagues redeployed to help look after patients in intensive care or shielding themselves, he volunteered to return to clinical work in order to support the NHS response to the pandemic.

By the time he returned to continue his sabbatical, improving access to surgical simulators for training was more important than ever. Most surgical operating stopped during the lockdowns, and many surgeons - newer trainees and seasoned consultants alike - would benefit from the practice and opportunity to retrain their skills before returning to operating theatres.

Protecting surgeons and patients

Retraining through simulation would help ensure patient safety as surgeons returned to this work, but also led to huge demand for training time on simulators. What's more, with social distancing rules in place, it wasn't possible for trainers to sit in the room with trainees trainers to deliver high quality, using the simulator and run

training sessions. George therefore helped develop a way of networking simulators together and streaming immersive Virtual Reality (VR) video feeds from simulators to trainees over the internet. This allowed safe, socially-distanced

sessions without needing to be physically in the room. This also allows far more equitable and efficient use of these important training resources, and supports better surgical outcomes for potentially tens of thousands of patients each year across the country.

Using AI to support surgeons

George also used his sabbatical time to work with a startup called TouchSurgery to test a new AI tool designed to support operating surgeons in real time. The tool is the first ever to offer real-time feedback and predictions to medical teams during an operation, helping to improve the speed and safety of surgery.

Thanks to George's role in developing the technology, Moorfields will receive free use of the tool for five years – it will ultimately aim to ensure safer operations for patients, better training for new surgeons and millions of pounds saved for the NHS.

My sabbatical time ended up being very different from anticipated as a result of the Covid-19 pandemic. With the extra challenges it presented, a lot of research was put on hold – and without the dedicated time that the sabbatical allowed me, it would have been incredibly difficult to dedicate the time and energy that these projects needed to see them come to such exciting conclusions.

George Saleh, Director of simulation training at Moorfields

What next?

Despite the disruptions of Covid, George's sabbatical was hugely successful. Now he's looking to widen this network of surgical simulators, further improving access to this critical training tool and improving patient safety across the country. George's work during his sabbatical also led to his appointment as the Royal College of Ophthalmology virtual and augmented reality lead, allowing him to continue developing his work in this area following his return to work.

With your support we've purchased a surgical simulator to train surgeons at Moorfields.



Funding to support early career researchers

Moorfields Eye Charity successfully secured further government funding to support early career researchers. The scheme is an extension of last year's support to reduce the impact of Covid-19 on medical research fundraising charities, and to support capacity building in medical research.

Moorfields Eye Charity is delighted to have received over £900,000 through the scheme over the last two years which will allow today's early career researchers to become the innovators of the future. Gaining government

investment in the talent pipeline allows the next generation to unlock even more exciting opportunities within and beyond eye health. The research that will benefit from this support is hugely varied, from data computation to short-sightedness, diabetic retinopathy to corneal disease. But as important are the people - PhD students, post-doctoral fellows and those just starting out on a career in research that will benefit from this support during what have been difficult times for medical research.



ever £900,000 of funding received



early career researchers supported including 11 PhD students

The support of Moorfields Eye Charity has given me a solid platform to launch my research career and explore how the retina develops and why it degenerates.

Natalia Jaroszynska, PhD student

As a member of the Association of Medical Research Charities (AMRC), we work with other charities to stress the importance of the life sciences. The AMRC is an important national voice in the field of medical research and we are proud to play an advice role in AMRC's work.

Highlights of our year





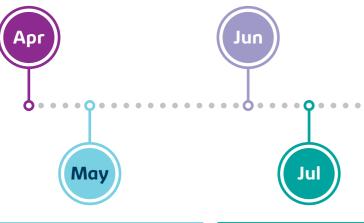
Oriel breakfast series of virtual events throughout the year on themes of education, genomics, translational research and patient care

Summer appeal launched fundraising for the Thunder microscope appeal and achieved target

The UCL Institute of Ophthalmology's Early Career Researchers symposium supported by the charity

Louisa Wickham, Moorfields medical director and charity trustee appointed as the first ever national clinical director for eye care

Camden Council approved Oriel planning application, the final step in the planning process



Ride London: former Moorfields patient, Angela Boucher, cycled 100 miles from London to Essex and back to raise money for the charity





Lukasz took on a 165km Ultra-Trail race in Snowdonia to fundraise for the charity, his son Roman was treated at Moorfields

Leah, her brother Nicci and godmother Andie took on a skydive to fundraise for the charity. Their mum, Joanne, was treated for eye cancer at Moorfields



Moorfields Stars supported by the charity, Mariya Moosajee, consultant ophthalmologist, awarded charity champion and the digital cataracts service won the award for innovation and improvement





Our CEO Robert Dufton and other supporters ran the London marathon fundraising for the charity

Afternoon tea with supporters at The Montcalm



Announcement of partnership with Diabetes UK, Fight for Sight and the Macular Society to co-fund research helping people living with diabetes

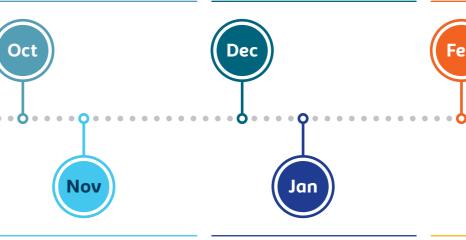
Our gifts in wills programme shortlisted for excellence in collaboration and partnership at the Smee & Ford Legacy Giving Awards 2023

Legacy Giving Awards 2023

PROUD TO BE A FINALIST

Founder trustees Andrew Ballheimer and Tony Briam step down and are replaced by Jyotsna Vohra and Kevin McGrath

A £300 million contract awarded to Bouygues UK to build Oriel

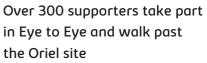


BBC One politics London: programme on the Moorfields diagnostic hubs (various diagnostic hub projects supported by the charity)

Launched winter appeal to support advances in AI at Moorfields and UCL

Oriel given final NHS and government approval

Volunteering Futures Fund project funded by NHSCT and the Department for Digital, Culture, Media and Sport, managed by Friends of Moorfields ran workshops in local schools. 1 of only 14 projects to be funded



Mar

Newly-funded fellow, Dr Nicky Cronbach's research will help families with primary congenital glaucoma





Our supporters

We are particularly grateful to the individuals and organisations set out below, but also the many other supporters who would prefer to remain anonymous, who have supported us during the year.

The Cadogan Charity

The estate of the late Alec John Custerson

EBM Charitable Trust

Evans Management Limited

Laura Fietta

The estate of the late Lucy Frances Frost

The estate of the late Joanne Giles

The estate of the late Richard Green

The estate of the late Frank Alan Hart

Hastings Talking Newspaper

Mr Tim Henderson

The Sir Joseph Hotung Charitable Settlement

The estate of the late Rita Kemp

Kusuma Trust UK

Mr and Mrs Stefanos Lekanidis

The estate of the late Lady Nicholas Gordon

Lennox

The estate of the late Monica Malone

Masonic Charitable Foundation

The Morris Family

Marie-Louise von Motesiczky Charitable Trust

NHS Charities Together

Nolan Family Trust

In memory of Mrs Rubab Sultanali

Nurmohamed

The estate of the late Margaret Irene Olliffe

The Alexander Pigott Wernher Memorial Trust

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The estate of the late Valerie Rosalind Reuben

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The estate of the late Martyn James Werreitt

Garfield Weston Foundation

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The Miss Barbara Mary Wilmot Discretionary

Trust

Jill Wilshaw

The estate of the late John Reginald Wilton

We would like to thank all the Moorfields and UCL staff who have contributed to the charity's continuing success. We would also like to thank our charity engagement volunteers, trustees, committee members and panel members. With your support, we can ensure that Moorfields Eye Hospital NHS Foundation Trust and the UCL Institute of Ophthalmology remain at the forefront of eye care, research and education worldwide and have the greatest possible impact on the global eye health agenda.



Find out more about our work investing in life-changing eye health

Get in touch

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moorfields-eye-charity

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