RESEARCH FOUNDATION
ROYAL VICTORIA
EYE & EAR HOSPITAL

A history of innovation, looking to the future.

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The Foundation

A history of innovation – looking to the future.

Our History

First conceptualised by Dr. Alan Mooney, the Royal Victoria Eye and Ear Research Foundation was established in 1974. A committee consisting of 9 Ophthalmic and ENT Consultants with Alan Mooney as Chairman embarked on a fundraising campaign to build a unit which would facilitate research into diseases of the Eye, Ear, Nose and Throat. Thanks to the enthusiasm of the committee and Alan Mooney, the Research Unit was opened in a converted mobile home in 1976. With further public fund-raising, the present permanent Research Foundation building was opened by the then Minister for Health, Dr. Michael Woods, in March 1981.

The crucial work of the Research Foundation is to develop and discover innovative treatments for people suffering from sight and hearing loss. We do this by supporting young talent and championing pioneering research.

The Research Foundation was one of the first sites in Ireland to carry out electrophysiology testing. This testing helps us identify and diagnose sight threatening eye conditions.

Why Research?

Research has enabled society to eradicate diseases and change lives. Medical Research is the search for understanding. Understanding leads to solutions. Solutions lead to cures.

Advances in health research have led to so many transformations in healthcare, most of which we now take for granted. We research for the future and for the generations that follow us in the hope that they too will 'take for granted' a transformation to what may once have been a life-altering diagnosis.

For more than 45 years, the Research Foundation has been at the forefront of research in eye and ear disease. During this period our research has been seminal in major scientific and clinical advancements.

Medical Research has changed the world. It improves healthcare systems, treatments and outcomes.

5 people a week in Ireland become blind.

54,810 people in Ireland live with a sight related disability, while almost

104,000 live with a hearing disability, and these figures continue to rise.

Sight and hearing loss have a profound effect on a person's quality of life. Those affected can experience difficulties with everyday activities; working at a job, going to school or college, sport or leisure activities, sometimes resulting in a loss of independence and sense of isolation from the world around us.

Our Aims

- To develop and champion new treatments for conditions that cause blindness and deafness.
- To initiate and support research to aid our understanding of how to treat and prevent eye and ear disease.
- Create real results in improved patient care and enhanced quality of life for patients.

Our work – at a glance

70
Research projects funded

24,000
Tests carried out

2394
Inherited Retingal Disease patients identified

102
Research Study presentations at the Eithne Walls Research Meeting

17
Research Study Medals Awarded

420
Attendees at New Frontiers Meeting

45
Years funding new clinical learning to improve patient treatment and care

We Are

Patient Centred

Patients are at the core of our work

We put patients first. Patients of the Research Foundation are respected, supported and valued. Patient care and comfort is our priority.

Change Agents

Championing ground breaking research

The Research we support is aimed at bringing about tangible change and advancements in clinical care and treatments.

Supporting young innovators

An eye to the future

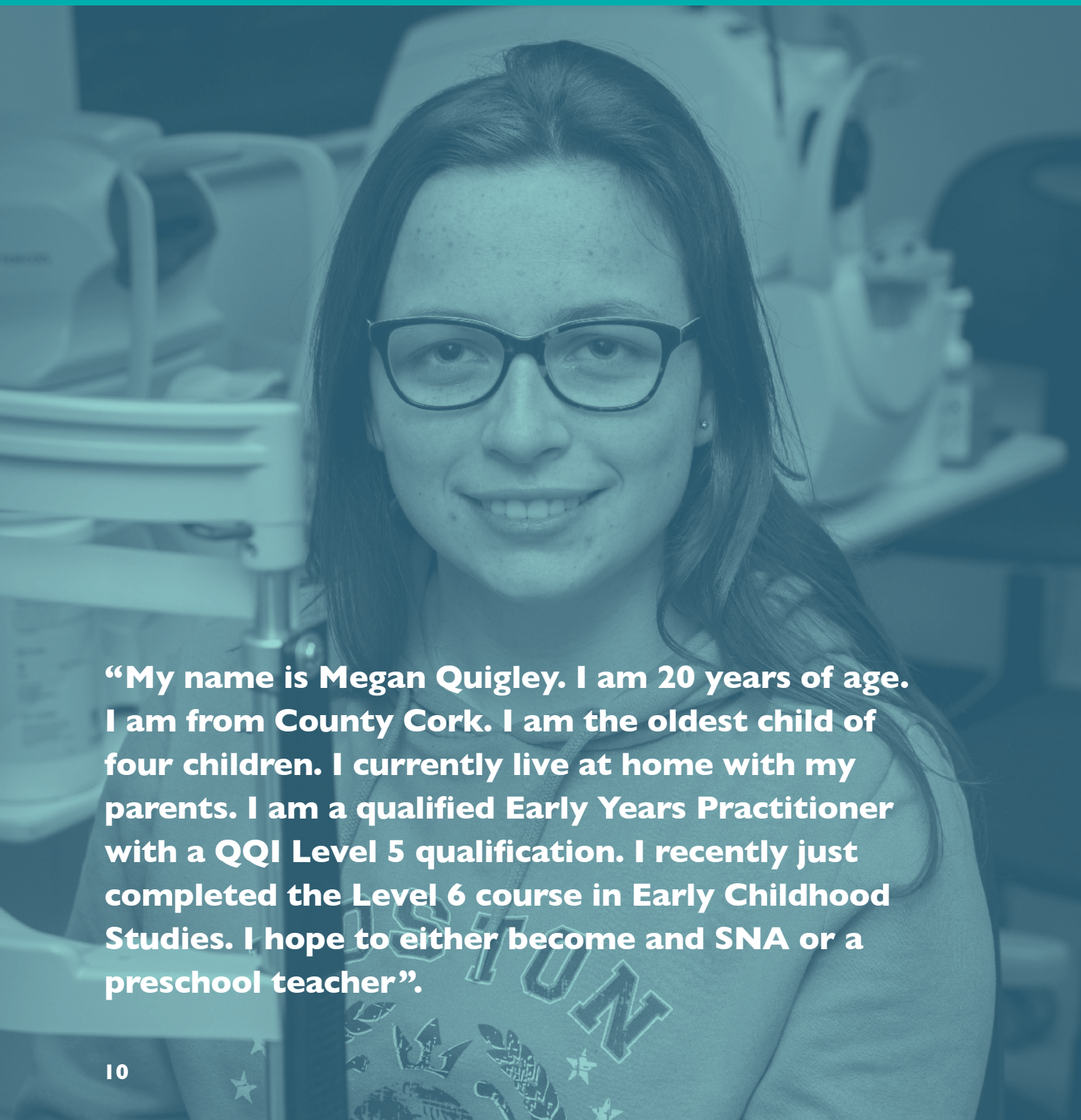
Underpinning our work is our mission to support physicians and researchers as they strive for knowledge and new discoveries to change how we treat and prevent disease.

Collaboration

Working together to achieve better results.

The Research Foundation works with academic institutions, healthcare providers and other charities to support research studies and projects nationwide.

What we do



"My name is Megan Quigley. I am 20 years of age. I am from County Cork. I am the oldest child of four children. I currently live at home with my parents. I am a qualified Early Years Practitioner with a QQI Level 5 qualification. I recently just completed the Level 6 course in Early Childhood Studies. I hope to either become and SNA or a preschool teacher".

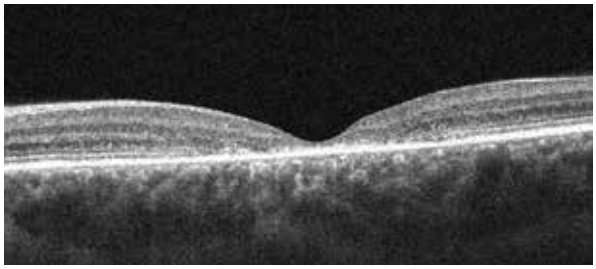
Patients

Research

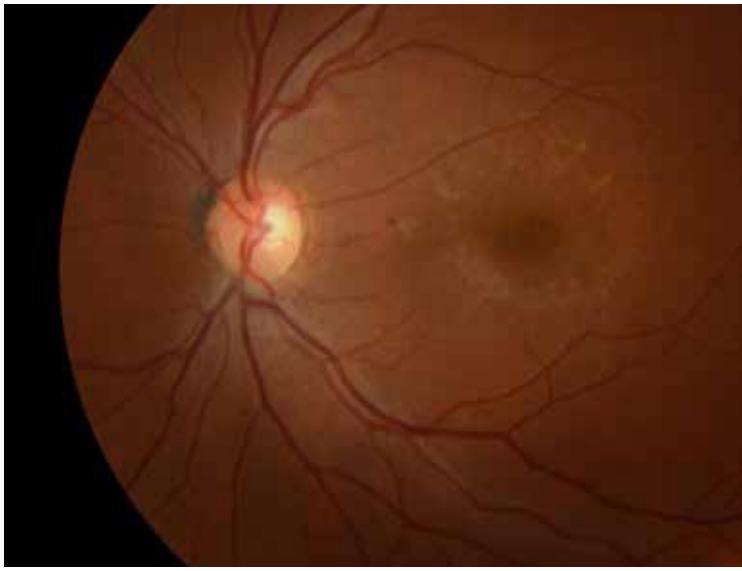
Education & Development

"I was diagnosed with Stargardts disease on the 7th of April 2016 at the age of 17. I first noticed that my eyesight was deteriorating when I was arould 15 but me being the stubborn person that I am, I didn't tell anyone and went on with my life."

'I was wearing contact lenses around the time so I suspected they were the issue. I only went to the opiticians because I thought there was something in my eye as it was very irritated. My opthamoligist noticed that my eyesight has gone down more than it has in the past. She suspected it was just because my eyes were dry and told me to come back in a week. My eyesight was still just as bad. After around three or four trips to the opticians, she decided to refer me to Cork University Hospital. After three different trips to the hospital, they noticed freakle-like substances in the back of my eyes. The consultant explained to me that I will have to go to Dublin to get more tests on my eyes to see what the condition is.



This is an Optical Coherance Tomogrphay (OCT) image showing Megan's photoreceptors in the macula.



This is an image of the back Megan's left retina. The shading in the centre is indicative of early changes.

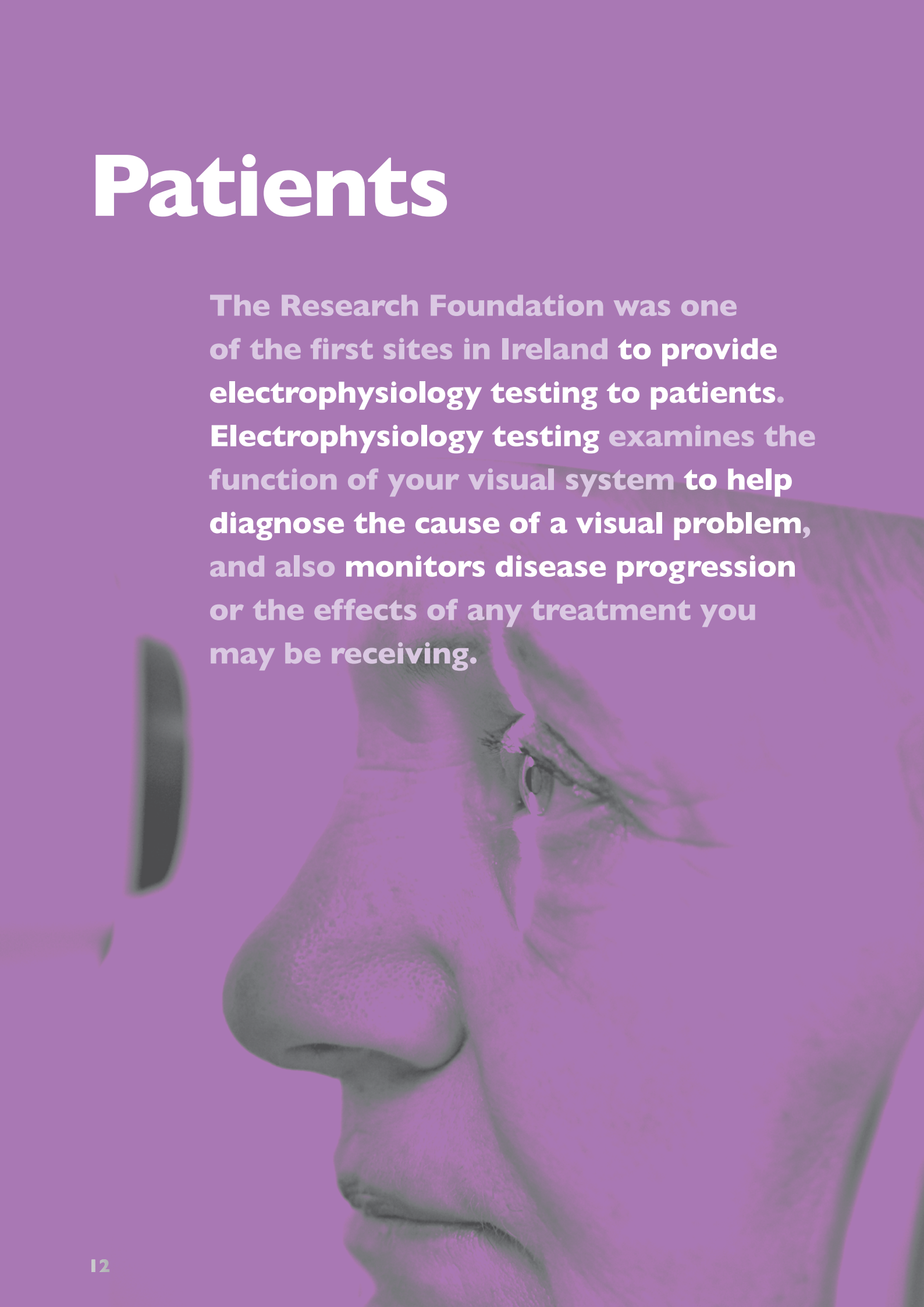
After 6 hours of agonizing tests, I was finally told that I have Stargardt Macular Dystrophy. I was told I would never be able to drive which was pretty devastating to me as I was planning to start learning the same year, and also there were certain careers I could not pursue. My doctor explained to me that I will have to be brought back to the hospital after I turn 18 as I was too young at the time.'

What is Stargardts Disease?

Stargardts is an Inherited Retinal Disease (IRD). Usually diagnosed in the under 20's, is the most common form of macular degeneration in children and young people. The macular is in the centre of the retina and holds photoreceptors which affect our central and colour vision. Stargardts is part of the IRD research underway in the Research Foundation.

Patients

The Research Foundation was one of the first sites in Ireland to provide electrophysiology testing to patients. Electrophysiology testing examines the function of your visual system to help diagnose the cause of a visual problem, and also monitors disease progression or the effects of any treatment you may be receiving.



Early diagnosis is imperative in the treatment and management of eye conditions. It allows for the management of the condition and symptoms.

Some of the tests carried out:

- Clinical Electrophysiology Service – to assess retinal and optic nerve function
- Colour Vision Testing – Farnsworth Munsell 100 hue and Lanthony D
- Dark Adaptation
- Visual field testing - Humphrey and Goldmann fields
- A-Scans for assessing power of lens implants for cataract surgery
- Full eye examination for patients and their families suffering from Retinitis Pigmentosa and other inherited retinal degenerations
- Pattern E.R.G for pre-clinical visual function loss in Glaucoma
- Optical Coherence Tomography for Assessment of Macular Disease and Glaucoma
- GDX for Retinal Nerve Fibre assessment in Glaucoma

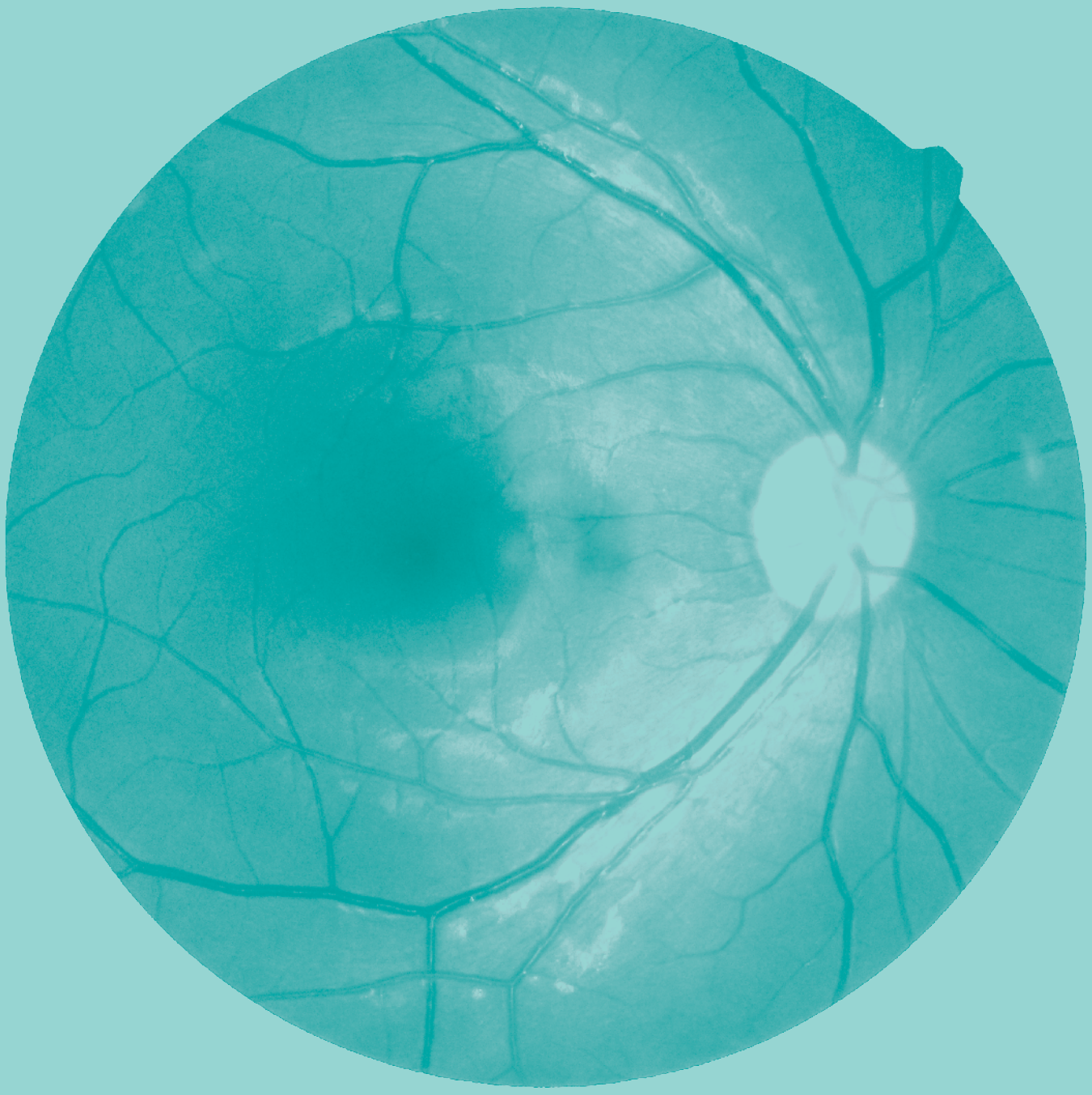
Counselling Service

The Royal Victoria Eye and Ear Research Foundation offers a counselling and support service for patients and their families.

This service is provided by Insight Counselling, an initiative of Fighting Blindness established in 2002. The objective of the service is to provide practical help, emotional support and psychotherapy to individuals experiencing sight loss, as well as to their families. At what can be a difficult and frightening time, counselling can help them cope with the challenges of receiving a diagnosis, and living with, a condition that causes sight loss.

On-going counselling is also available by appointment Monday to Friday at the Insight Counselling Centre premises at 7 Ely Place, Dublin 2. It is also possible to avail of their nationwide telephone counselling service, to arrange an appointment for any of these services please contact Insight Counselling 01-6746496. This important service is provided free of charge by Fighting Blindness and is open to referrals from the clinical staff.

Research



Genetics Research

Genetics is the study of genes and heredity. As our understanding of genetics and hereditary conditions develops, the potential for preventative treatments is exponentially expanded and catapults us to a new level of perception on how and why conditions are passed on through families.

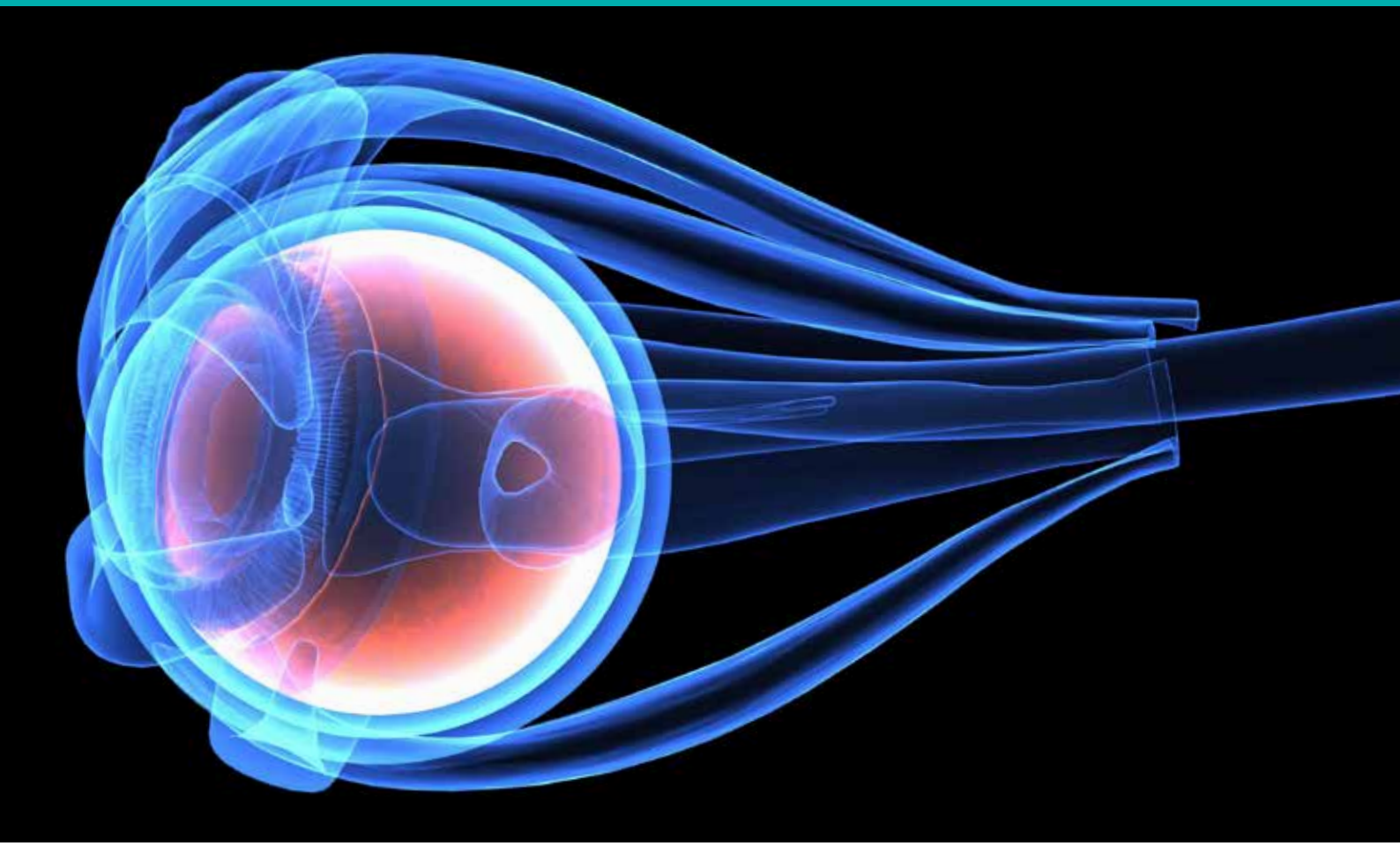
The Research Foundation has a long standing interest in inherited retinal degenerations since its inception. The Foundation is the premier centre in Ireland for the clinical characterisation of patients with a variety of inherited diseases such as Retinitis Pigmentosa (RP), Choroideraemia, Stargardts Disease and X-Linked Retinoschisis, amongst many others. Patients are referred from Ophthalmology units throughout the country for these highly specialised investigations.

At present, patients with inherited retinal degenerations face inexorable loss of vision, in many cases resulting in total blindness. However, as a result of the molecular genetic advances with which the Foundation has been intimately involved, realistic prospects now exist to give hope that treatments will become available in the foreseeable future. At the Foundation, we aim to continue to be at the forefront of research which will eventually result in the development of sight-saving treatments for these patients.

The Foundation has collaborated closely with the Ocular Genetics Unit at Trinity College Dublin for Three decades in the genetic characterisation of patients attending the Foundation. This collaboration has resulted in the identification of novel disease causing genes responsible for some of these inherited retinopathies. Amongst the pioneering discoveries resulting from this collaboration were the identification of Rhodopsin, the first disease associated gene ever identified in any form of RP and now known to be the most frequent case of autosomal dominant forms of RP, the first reporting of a mutation in the Peripherin/RDS gene in a form of autosomal dominant ROP, the first implication of the mitochondrial second serine transfer RNA gene (MTTS2) in patients with RP and hearing loss, and the first documentation of a dominantly acting mutation in the RPE65 gene in a late-onset form of RP. None of these discoveries would have been possible without the generous cooperation of patients ascertained and clinically investigated at the Foundation. Researchers at the Foundation continue this effort with the goal of achieving the core aim of the Foundation, namely, ‘development of new treatments for eye and eye conditions which will eliminate hearing and sight loss’.

Retinal Research

The Retina is the thin layer of cells lining the back of the eye. These cells are light sensitive, sensing light as it hits the eye. The retina sends signals via the optic nerve to the brain, resulting in visual images.



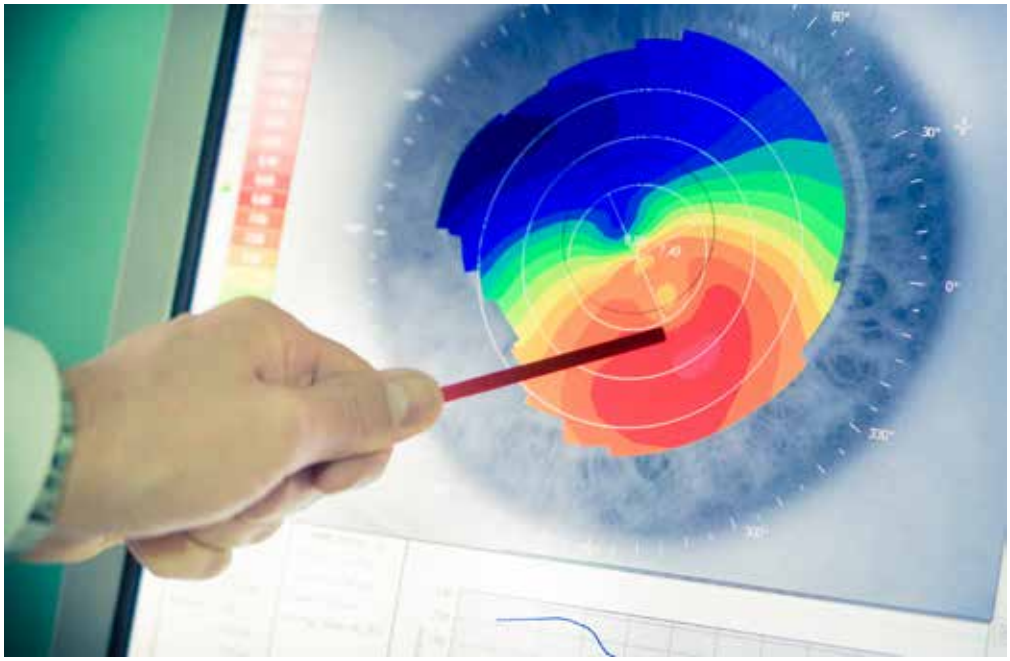
There are multiple conditions of the retina and consequently, research in this area is very diverse. The Research Foundation has participated as the primary site for a number of important clinical trials. Amongst these has been the study of treatments for retinal vein occlusion - the blockage of the small veins of the retina. Retinal vein occlusion and pressure can cause blurred vision or even sudden permanent blindness according to levels of severity.

The Research Foundation has investigated the use of anti-VEGF intravitreal injections for the treatment of retinal diseases. The use of this therapy has been found be to effective in treating symptoms of age related wet macular degeneration, diabetic macular oedema as well as retinal vein occlusions.

Corneal, Ocular Immunology and Inflammation Research

The cornea is the clear window at the front of the eye. It forms a protective layer and has an important function in focussing vision and allowing light enter the eye.

The Research Foundation supports long term collaboration between the ocular inflammation/cornea service of the Royal Victoria Eye & Ear Hospital, the National Institute for Cellular Biotechnology (NICB) at Dublin City University, the Department of Immunology at the Royal College of Surgeons Ireland and the Department of Rheumatology at St Vincent's University Hospital. This collaboration brings together clinical and scientific skills from a range of disciplines that are helping to improve our understanding of a number of inflammatory eye conditions and corneal diseases. The wide ranging research in these areas of specialty continues to significantly advance our scientific and clinical knowledge - benefiting professionals, and patients.

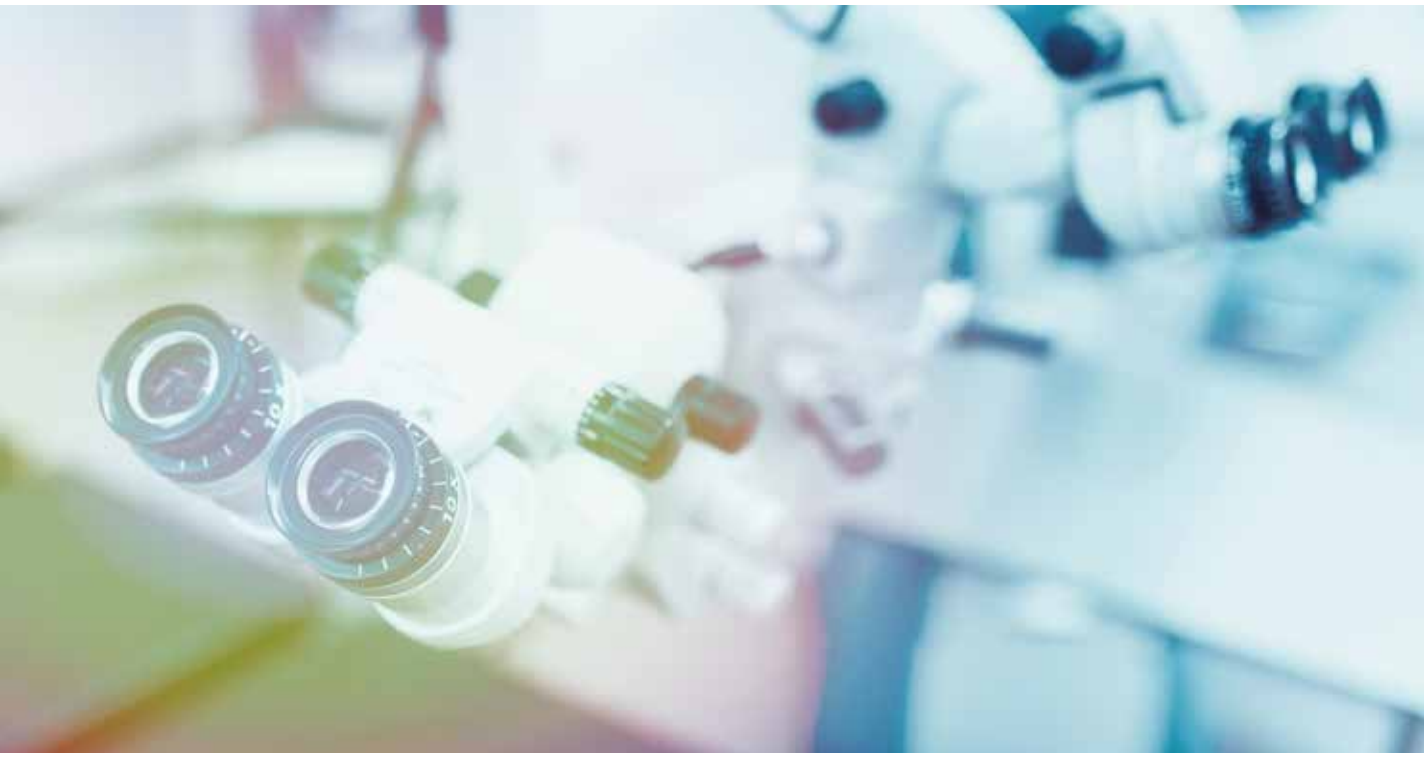


Oncology & Pathology

Ocular Oncology is the highly specialised treatment and research of tumours of the eye. The combined expertise of Ocular Oncology and Pathology is crucial for the diagnosis, treatment and prevention of cancers of the eye.

Collaboration between the Pathology and Oncology services at the Royal Victoria Eye & Ear Hospital and Dublin City University looks at potential prognostic biomarkers in eye cancer. The pathology and ocular oncology units at Royal Victoria Eye & Ear Hospital are also working closely with the National Institute for Cellular Biotechnology NICBI on a Research Foundation supported research programme in identifying specific proteins in patients with eye melanoma that help to predict the spread of cancer outside the eye, with the aim of improving long term patient survival.

Continuing developments in this important area of research are extremely impactful - influencing and informing our management and treatment of these conditions.



Supporting Clinical Trials

Clinical Trials are a type of research study which tests a potential treatment for a condition or disease.

Clinical trials are the first step in making a new treatment available to patients.

Clinical trials can provide an opportunity for patients to access a new treatment for their condition.

Participation is voluntary and closely monitored by the clinical trial team. Being part of a clinical trial can present a patient with the chance to engage with their own health care and learn more about the condition.

In partnership with industry, the Research Foundation supports clinical trials in a variety of areas. Patients come first and trials undertaken by the Research Foundation demonstrate the potential to improve and enhance health care and outcomes.

Education & Development

Supporting and facilitating new learning and growth.

New Frontiers in Ophthalmology

New Frontiers in Ophthalmology is the annual meeting of the Research Foundation. First held in 2013, it has developed to become a seminal event in the educational calendar.

Open to all clinicians, and hosting key international speakers, New Frontiers in Ophthalmology is at the forefront of education in the diverse field of Ophthalmology. Topics range from Corneal Stem Cell and Tissue Engineering, Diabetic Retinopathy, Glaucoma, Ocular Oncology and Paediatric Ophthalmology.

Attendees have the opportunity to engage with experts and learn of the latest developments in their field. New Frontiers in Ophthalmology is recognised by the Irish College for Ophthalmology for continuing medical education credits.

Eithne Walls Research Meeting - Supporting Young Talent

An important aspect of the Research Foundation's work is to nurture and support young doctors in the fields of Ophthalmology and Otolaryngology. It is with new research and innovations that we work towards novel treatments for disease.

Held annually, the Eithne Walls Research Meeting provides a forum for trainee doctors to present their research and clinical study work to their peers. The meeting is held in memory of Dr. Eithne Walls, a Senior House Officer of Ophthalmology in the Royal Victoria Eye and Ear Foundation who was a passenger on the ill-fated flight A447 that disappeared over the Atlantic on 1st June 2009.

The meeting is an opportunity for participants to enhance their experience in undertaking clinical learning and research, crucial to continuing our work to advance education and development.

Young doctors who have taken part in the Eithne Walls Research Meeting have gone on to be part of research

projects that bring us closer to developing new treatments for conditions that cause blindness and deafness - broadening our understanding of how to treat and prevent eye and ear disease.

The Research Foundation offers trainees who participate the opportunity to win 1 of 3 awards for the best presentation:

- **Ophthalmology:**
  The Eithne Walls Medal
- **Otolaryngology:**
  The Aongus Curran Medal
- **All Specialties:**
  The Research Foundation Clinical Prize

The Aongus Curran Medal commemorates our colleague Professor Aongus Curran, the eminent ENT Surgeon and Professor of Otorhinolaryngology who passed away in August 2016.

Research Foundation Annual Grant Scheme

The Research Foundation Annual Grant Scheme is an opportunity for Researchers to apply for support for their research study.

Applications are rigorously assessed and reviewed by an independent panel.

It is with new research and innovations that we work towards our goal of prevention and elimination of eye and ear disease. Research studies funded by the Research Foundation must have real and tangible translational benefits for patients and influence developments in clinical care. In this way we ensure it is the patient who is the true beneficiary of our work.

Governance

The Research Foundation is governed by a Board of Directors. It is the duty of the Directors to help achieve the Research Foundation's charitable objectives and to safeguard and promote its values. The Directors meet on a quarterly basis. The Directors are accountable to the Members of the Research Foundation who meet once a year at the Annual General Meeting.

Board of Directors

Jeremy O'Connor	*Director (Chairperson)*
Aoife Doyle	*Director (Treasurer)*
Noel Horgan	*Director*
Mark Cahill	*Director*
Conor Murphy	*Director*
Barry Quill	*Director*
Julian Douglas	*Director*
Lorraine Foley	*Director*
Edward Loane	*Director*

Members of the Research Foundation

- Patrick Dowling
- William Power
- Louis Collum
- Jim Ruane
- David Charles
- Hugh Kelly
- Doreen Delahunty

Company Registration Number (CRO): 514473

Charity Registration Number (CRN): 200835353

We are a charity organisation, governed by the Charity Regulator of Ireland, and adhere to the Governance Code for Charities

Be part of the search

Our Donors – part of a community

Our supporters are cornerstones of the Foundation. When you become a supporter of the Research Foundation, you are part of a community that is inspired by the impact research has both in the present, and for future generations. Think of the vast chasm between health outcomes now, and in the past – supporters of research help pave the way forward

We promise to use all donations as they are intended – to fund research and innovation in the fight against sight and hearing loss. The Research Foundation is a registered charity and adheres to the Guiding Principles of Fundraising.

Our Donor Charter outlines our commitment with our donors – a relationship based on respect and appreciation.

Whether you are an individual or an organisation, becoming a supporter of the Research Foundation is a partnership. Some of the ways you can support our work.

- **Become a Supporter**
  A community with insight
- **Become a Patron**
  Be a cornerstone of the Foundation
- **Research Foundation Business Network**
  A Partnership with Purpose
- **Leave a Legacy**
  Look ahead and leave your mark on the future

Please visit us at www.researchfoundation.ie to learn more about our work and become part of our community.

Royal Victoria Eye & Ear Research Foundation
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We welcome your feedback on our performance via any of the contact points provided.

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