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**FIGHT  
FOR  
SIGHT**  
EYE RESEARCH

# news 03

News for Fight for Sight supporters – autumn 2007

## Clinical trial in China to prevent glaucoma



One of the new research projects Fight for Sight has committed to fund is a ground-breaking clinical trial in China into the prevention of angle-closure glaucoma. Fight for Sight awarded £148,000 to fund this project led by Dr Paul Foster from UCL Institute of Ophthalmology (pictured), one of the world's leading specialists on glaucoma.

Glaucoma is the leading cause of irreversible blindness in the world; estimates suggest that up to 60 million people may be affected by the condition. Dr Foster's research focuses on a specific form of glaucoma called angle-closure glaucoma, which is particularly prevalent in China.

*"For the last 10 years I've been studying angle-closure glaucoma. It's more common in Asia but we don't actually know how widespread it is in the West because very few specialists are looking out for*

*it in their patients.*

*What we do know is that in Asian people the iris is very close to the channels that drain fluid out of the eye. In the case of glaucoma patients, the iris actually covers some of the drainage channels so the drainage of fluid from the eye is reduced. Pressure builds up in the back chamber of the eye, forcing the iris to bow forward like a sail in the wind. This creates a vicious cycle of increasing blockage of drainage and increasing pressure."*

The money awarded by Fight for Sight will be used to fund a clinical trial of 10,000 people in China where a simple laser treatment will be tested to see if it safely prevents angle-closure glaucoma. If the trials are successful it is likely that the practice will be rapidly adopted by ophthalmologists in major urban centres throughout Asia and around the world.

*"The results of this project could have a global impact on the care of glaucoma patients and will make a significant impact on blindness worldwide."*

## Continuing the fight against blindness

Thanks to your support and donations we were able to award £1.54m to fund 13 new research projects during 2007.

This is an incredible achievement, thank you. We receive regular reports on the work of all researchers and you can read about some of their work in this newsletter.

## Revolutionary new research into childhood blindness

**One of the projects we've been excited to help support is the world's first clinical trial of gene replacement for childhood blindness. The trial is the first of its kind and could have a significant impact on future treatments for eye disease.**

The trial involves people who have a condition called Leber's congenital amaurosis (LCA), a type of inherited retinal degeneration. This disease causes progressive deterioration in vision due to a gene abnormality, which prevents normal function of the retina. **There is currently no effective treatment for this condition.**

The trial is testing a new technique to treat LCA, which involves inserting healthy copies of the gene into the cells of the

retina to help them to function normally. Restoring the activity in these cells should restore vision.

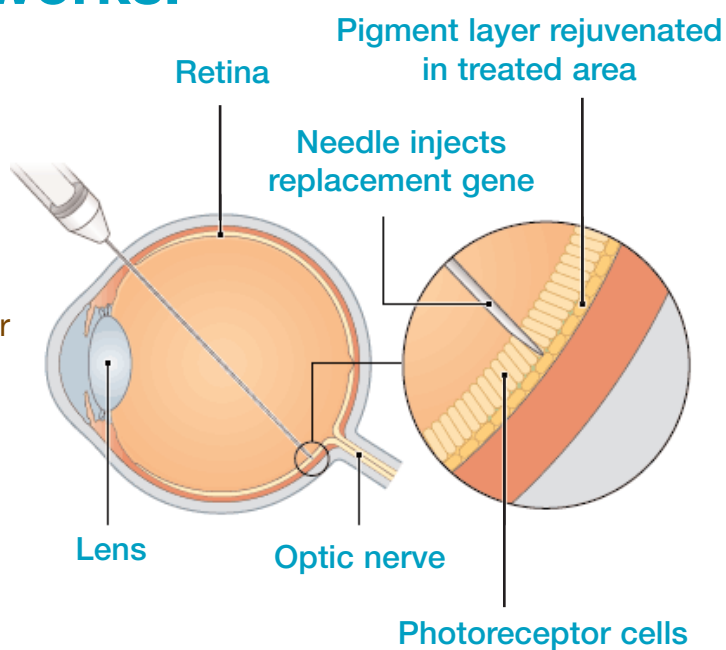
The team conducting the trial from UCL Institute of Ophthalmology and Moorfields Eye Hospital, is led by Professor Robin Ali, and includes leading eye surgeon Mr James Bainbridge and leading retinal specialist Professor Tony Moore.

The trial's first operations have already taken place. Professor Moore said: *"Some indications of the results of the trial may be available within several months. However, the subjects will need to be followed-up to assess the long term effect of the treatment. It will be many months before we have the full picture."*

**If successful, the results of this trial could have a profound impact on childhood blindness.**

### How gene therapy works:

- The needle is inserted through the eye and into the retina.
- The replacement gene is injected between the two layers of cells which make up the retina. It is a faulty gene in the pigment layer which is preventing the photoreceptor cells from detecting light.
- Once treated, the cells in the pigment layer are restored and can support the photoreceptor cells to detect light as normal.
- The photoreceptor cells can now send nerve impulses to the optic nerve for transmitting to the brain.



Source: Moorfields Eye Hospital

## 21 years in eye research

### Discovering the gene implicated in Nance-Horan Syndrome

Dr Alison Hardcastle first became interested in vision as an undergraduate 21 years ago. With funding from Fight for Sight in 1989, she started her PhD researching the genes in the retina that can cause blindness when they mutate.

Alison's PhD inspired her to continue working as a postdoctoral research fellow specialising in X-linked retinal diseases. These are diseases, which are generally passed on from mother to son. She has since taken up a Lectureship at UCL Institute of Ophthalmology and has started to build up her own research group.

In 2002, Fight for Sight funded Simon Brooks' PhD, working under Alison's supervision. Simon's research concentrated on the specific gene causing inherited cataract and in 2004, he identified the gene implicated in Nance-Horan Syndrome, a disease which causes babies to be born with cataracts. Now that this gene has been identified families can be screened to see whether they have the faulty gene and the appropriate counselling given.



**Dr Alison Hardcastle and Dr Simon Brooks**

Simon and Alison continue to work together today. Their hope is that through their research, targeted therapies can be developed and made available to all patients.

Fight for Sight is very grateful to the Miss Barbara Mary Wilmot Discretionary Trust who are supporting this research for three years. Read more about this Trust on page 8.

## Researching the genetics of glaucoma

Dr Paul Foster, who is featured on our front page, continues to investigate how angle-closure glaucoma is inherited within families thanks to the very generous donation of £250,000 from the Richard Desmond Charitable Foundation. Part of this grant is being used to support a clinical research fellow, Miss Sancy Low, who works alongside Dr Foster on this project.

Dr Foster and Miss Low will be examining the eyes of a large number of family members, both affected and non-affected, and analysing DNA samples to identify the genetic cause for angle-closure glaucoma.

**Understanding the genetics of the disease is the first step to combating it.** The results of this research could even have an impact on conditions such as myopia.

## Spotlight on cataract - the world's leading cause of blindness

**Most of us will have heard of cataract, the world's leading cause of visual impairment. In the UK alone, 250,000 cataract operations are carried out annually making it one of the most common surgical procedures performed by the NHS.**

Thankfully, whilst the operation to remove cataracts is now relatively straight forward, problems can occur afterwards when an 'after-cataract' develops. Put simply, this is another cataract covering the new artificial lens, which can lead to blindness.

The most effective treatment at the moment is for patients to undergo further surgery, but this has associated risks and in some developing countries, is simply unavailable. In India for example, 3.8m people become blind from cataract each year. **This is why Professor Roy Quinlan's research project at Durham University is so important.**

Professor Quinlan and his team are being funded by Fight for Sight to understand the causes of after-cataract so that new drug-based treatments can be developed to prevent their development.

*"It is important to develop alternative therapies for after-cataract, particularly in the developing world where the problem is much greater due to a lack of resources.*

*New treatments for after-cataract are needed to improve our current treatment capacity in the UK and also to make an impact on the estimated 45 million untreated cataracts around the world. The possibility of developing drug therapies to combat after-cataract would represent a tremendous advance for world health."*

Fight for Sight is very grateful to The George John and Sheilah Livanos Charitable Trust who are generously supporting this project in its entirety. Read more about this Trust on page 8.

## Cataract:

### Did you know?

- The lens is a clear tissue found behind the iris, the coloured part of the eye. The lens helps to focus light on the retina at the back of the eye to form an image. To produce a sharp image, the lens must not only be clear, but also formed properly.
- A cataract is a clouding of the lens itself. Vision becomes blurred because the cataract obstructs the light from passing through the lens and distorting what we see – a bit like frosted glass; it is not a layer of skin that grows over your eye, despite what you may have heard.
- Cataracts can form at any age although are more common as we get older.
- Cataracts can also be present at birth. These are called congenital cataracts and should these be due to an inherited genetic problem, then the cause can often be identified, although this does not affect treatment.
- Although researchers are learning more about cataracts, no one knows for sure what causes them. There may be several causes and some studies have linked smoking, excessive exposure to sunlight and poor diet with cataract development. Sometimes cataracts are caused by other health problems such as diabetes.
- A cataract operation usually takes about 15 to 20 minutes and during the operation the lens with the cataract is removed and replaced by a permanent plastic lens.

Source: RNIB

## Launch of the 'London Project to Cure AMD'

**An exciting new project was launched at UCL Institute of Ophthalmology in June, the London Project to Cure AMD (age-related macular degeneration).**



**AMD is the most common cause of sight loss in the UK. The condition affects around a quarter of people over the age of 60 in the UK and 14m people across Europe.**

This research project brings together for the first time some of the world's leading scientists and clinicians to develop a cure for AMD.

Whilst the 'wet' form of AMD may currently be treated with some success, there is little to help people with the 'dry' form of AMD.

### New Fight for Sight website is launched

If you've looked at our website recently you may have noticed a few changes. We launched our new site in July in time for the new round of research grants applications. It contains all the latest news and information including appeals and newsletters. The 2007 Annual Review will also be available online when it's published in October.

**If you haven't seen the website yet please do take a look and tell us what you think. It's the same address as before: [www.fightforsight.org.uk](http://www.fightforsight.org.uk)**

The London Project aims to develop a treatment to restore vision to people with dry AMD using cell replacement therapy from human embryonic stem cells. **Previous trials using patients' own cells have proved that this approach can work.**

Fight for Sight has funded the work of Professor Pete Coffey, UCL Institute of Ophthalmology and director on the London Project, for almost three years now. He said:

*The London Project aims to deliver treatment for a disease which has no alternative therapy. Using stem cells, which are far more adaptable, can only improve success of what has already been achieved and in addition establish this as a global therapy."*

Professor Alistair Fielder, Senior Medical Adviser of Fight for Sight (pictured above), said: *"We are excited about the work of Professor Coffey and his team. The London Project represents a real chance to tackle this untreatable condition and bring hope to many. It is marvellous to think that clinical trials could start within five years."*

### Update on our appeal for funds into inherited retinal diseases

Some of you may have received an appeal recently on behalf of Dr Andrew Webster from UCL Institute of Ophthalmology and Moorfields Eye Hospital.

Dr Webster asked for your support and donations towards research into inherited retinal diseases. We are delighted with the response. So far we've raised an incredible £15,000, which will go towards funding more research into this important area. Thank you to everyone who responded.

## Read how one green-fingered supporter is raising money for Fight for Sight



Guildford gardener, Graham Mitchell (pictured), is raising money for Fight for Sight by holding greenhouse sales in his garden.

So far, Graham, who has the degenerative eye condition, retinitis pigmentosa, has raised £250 for Fight for Sight. He's not stopping here though and plans to hold many more greenhouse sales in the future.

Graham's decision to raise money for Fight for Sight was prompted by staff at Moorfields Eye Hospital who saved his sight eighteen years ago.

**If you have a hobby or interest that could help raise money for Fight for Sight, anything from organising a cake sale to hosting a charity dinner party, please contact Rowena Finn on 020 7929 7755. We can help you plan and advertise your event to ensure it is fun and that it raises more money for eye research.**

## Fight for Sight goes green

Fight for Sight is on a mission to go green and reduce our carbon footprint. All our letters and publications are now printed on recycled paper and 90% of office waste is recycled.

You can also help by recycling old mobile phones. The scheme is organised by a company called Community Fonebak and for every phone that can be resold in a developing country, Fight for Sight receives £5. Contact Rowena Finn on 020 7929 7755 or email [events@fightforsight.org.uk](mailto:events@fightforsight.org.uk) for more information.

## We're getting ready for Christmas

We know it's early but sometimes it helps to be organised. Which is why we have included our 2007 Christmas card brochure containing a selection of cards personally selected by us.

**Every purchase you make will help raise money to fund more vital research into blindness and eye disease.**

**To order your Christmas cards, send back the enclosed form or go online at [www.fightforsight.org.uk](http://www.fightforsight.org.uk).**



## “Our most successful golf day challenge yet...”

Fight for Sight's twelfth annual golf day challenge took place at Stoneleigh Deer Park in Warwickshire on 4 July raising over £19,000. The event is organised by Fight for Sight Vice President and Committee Chairman Clive Stone and is an important fixture in Fight for Sight's fundraising calendar. **The golf days have raised over £156,000 for the charity so far.**

And the winners this year? Leicester Optical team won the Fight for Sight trophy beating last year's winners, Portland Optical, who came a close second.

**Get in early to book your place for next year's golf day on 2 July 2008. Call Rowena Finn on 020 7929 7755 or email [events@fightforsight.org.uk](mailto:events@fightforsight.org.uk)**



## Our new supporters

As part of our awareness and fundraising strategy we recently sent an appeal to several thousand non-supporters asking them to donate to Fight for Sight.

This is an important part of our fundraising activity: the more people who are aware of Fight for Sight, the more money we can raise and the more research we can fund into the prevention and treatment of blindness and eye disease.

We had a fantastic response and now have 2,600 new supporters who sent us donations. Thank you to all our new supporters.

## Help us plan for the future

Sometimes it's easier to support us by setting up a direct debit with your bank. This way you'll know you're sending us a regular donation and making a long term commitment to the charity. So, in November we'll be starting our annual telephone campaign. If you'd prefer not to be contacted by phone however, let us know.

## Third annual coffee morning for choroideremia

Dot Grindley from Lee in South East London, recently held her third annual coffee morning in aid of Fight for Sight, raising £1,560 for the charity. The money is being used to fund research into choroideremia, a rare inherited eye condition that has affected several members of her family including her grandson, Tommy.

*“The coffee mornings have become a regular event now and everyone looks forward to them. It's a wonderfully friendly morning with a very special group of people who really want to help us fund more research into choroideremia to help Tommy and other people affected by this devastating eye disease.”*

Dot and her friends and family organise regular fundraising events throughout the year and have so far raised more than £50,000 for Fight for Sight.



## Recent awards

**Fight for Sight receives tremendous support each year from hundreds of different charitable trusts and foundations. Here we tell you about three that have recently awarded grants to the charity.**

### The Freemasons' Grand Charity

The Freemasons' Grand Charity is a grant-making charity, which is funded by Freemasons and their families. It continues a commitment to charitable support that began nearly 300 years ago in the earliest days of organised Freemasonry. During 2006, the Charity made grants totalling over £4.6 million.

The Freemasons donate to many different charities each year and we are delighted that they have committed to support Fight for Sight with a grant of £40,000 over two years.

This grant is being used to support Dr Andrew Scott's clinical study at Moorfields and UCL Institute of Ophthalmology researching diseases such as diabetic retinopathy and age-related macular degeneration.

*"During our lifetime many of us will experience deterioration in our vision. The Freemasons' Grand Charity is very happy to be supporting this important research to find new ways to fight eye disease and blindness. As a charity, one of our aims is to help the wider community and we were impressed by Fight for Sight's commitment to bringing real benefits to people living with impaired vision and loss of sight."*

**Laura Chapman, Chief Executive,  
The Freemasons' Grand Charity**

### The George John and Sheilah Livanos Charitable Trust

The Trust was set up in 1985 and awards grants to various charities including health and research charities. The Trust has been supporting Fight for Sight since 1992 and has donated £172,393 to date.

Following a meeting with the trustees earlier this year we were delighted to be awarded £140,000 towards funding Professor Quinlan's three-year project in Durham University researching the causes of after-cataract. You can read more about this project on page 4.

### Miss Barbara Mary Wilmot Discretionary Trust

Miss Barbara Wilmot left her estate for the benefit of nominated charities supporting research into eye disease. The trust was set up in memory of Miss Wilmot's father who became blind in later life, and has supported Fight for Sight since 1996. The Trust has donated more than £382,000 to date.

The Trust usually funds the purchase of medical equipment but has made an exception in the case of Dr Alison Hardcastle's project into inherited cataracts. You can read more about this project on page 3.

Thanks to the Miss Barbara Mary Wilmot Discretionary Trust, Dr Hardcastle's team have been awarded £81,492 for their research as well as a further grant towards a fluorescence microscope.

**1st Floor  
36-38 Botolph Lane  
London EC3R 8DE  
Tel 020 7929 7755  
Fax 020 7929 4341  
info@fightforsight.org.uk  
www.fightforsight.org.uk**

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Royal Patron: HRH The Duke of York KG KCVO President: The Right Hon Baroness Boothroyd OM PC  
British Eye Research Foundation operating as Fight for Sight is a company limited by guarantee registered in England  
(Company Number: 05525503) and a charity registered in England by the Charity Commission for England and Wales (Number: 1111438)  
whose registered office is at 1st Floor, 36-38 Botolph Lane, London EC3R 8DE