

Pioneering UK Stem Cell Therapy



HEART CELLS
FOUNDATION

NEWSLETTER 2014







Update on Stem Cells
Research Programme

CELEBRATING
10 YEARS
OF FIGHTING
THE NATION'S
BIGGEST KILLER



Coronary Heart Disease is the most common cause of death in the UK

THE FACTS

-  EVERY 7 MINUTES A PERSON DIES OF A HEART ATTACK IN THE UK
-  CORONARY HEART DISEASE IS RESPONSIBLE FOR ALMOST 74,000 DEATHS IN THE UK EACH YEAR
-  OVER 750,000 PEOPLE ARE LIVING WITH HEART FAILURE
-  APPROXIMATELY 103,000 PEOPLE IN THE UK WILL SUFFER A HEART ATTACK THIS YEAR
-  THERE ARE OVER 1 MILLION PEOPLE LIVING IN THE UK WHO HAVE HAD A HEART ATTACK
-  STEM CELL THERAPY COULD RESTORE DAMAGED HEART MUSCLE CELLS AND IN SO DOING IMPROVE THE QUALITY OF A PATIENT'S LIFE



REVOLUTIONARY TREATMENT

The Heart Cells Foundation, at Barts Health NHS Trust, is funding the research and development of a revolutionary and potentially life-saving treatment that uses a patient's own adult stem cells to repair the heart.

This ground-breaking therapy could help those with heart disease, whether they have suffered a heart attack or have developed a weak heart for other reasons.

THREE TRIALS

Trial 1 – Regenerate IHD

Treated patients suffering from heart failure. It has now finished recruitment and follow-up. We have received extremely positive feedback from patients who have felt a marked improvement in their health and everyday lives. We have analysed the data and it has shown positive results towards patients treated with stem cells. We are currently awaiting publication of these results in the medical literature.

Trial 2 – Regenerate AMI

Treated patients within 24 hours of suffering a heart attack, finished its follow up phase in March. It will then take us about 6 months to finish analysing the results before submitting for publication.

Trial 3 – Regenerate DCM

Treated patients with congenital and inherited heart failure and has now finished. The results, which we are in the process of publishing in the medical press, have shown a positive benefit for patients treated with stem cells over those treated with a placebo.



Professor Anthony Mathur
Head of Cardiology
(Clinical and Research Lead)

Dear Heart Cells Foundation Supporters

Over the last ten years of research we have been using patients own stem cells to repair their heart. This has led to important and exciting findings. A whole new area of medicine has been born and with it, the potential to use a person's own cells to repair damage caused by cardiovascular disease, now the UK's biggest killer.

Whilst the prognosis for patients suffering from cancer has improved in the last 10 years this is not the case for patients suffering with heart disease. While we have had success in initially treating heart attacks, this has led to an increase in the number of people developing heart failure.

The pharmaceutical industry has failed to deliver new therapies to treat heart failure and this is why we are so excited by results of our stem cell trials, which suggests we have found a new treatment to help over one million patients with heart disease in the UK.

The path to developing new treatments takes time and careful clinical research. The last ten years have placed us at a stage when we can begin pre-licensing trials that, if successful, will allow us to incorporate stem cell therapy across the NHS. It is for this reason that I again request your support so that we can fund this crucial final stage.

Many thanks for all your support thus far and without which we would not have made these ground breaking discoveries.

Professor Anthony Mathur

HEART CELLS FOUNDATION

10

YEARS
TIMELINE

2004

Heart Cells Foundation began fundraising at Mansion House

Trial 1

The first stem cell trial to be ethically approved in the UK

2005

First trial patient recruited to a stem cell trial in the UK

2007

Trial 2
Receives ethics approval

MEET THE TEAM



PROFESSOR ANTHONY MATHUR AND THE RESEARCH TEAM

We work very well as a close team under the guidance of Professor Mathur. For us it's a very exciting time, pioneering stem cell therapy that could provide truly significant benefits to thousands of people in the UK who suffer the debilitating effects of heart failure caused by heart disease.

Our studies have started to show us that adult stem cells in patients own bone marrow can begin to repair damaged hearts. There is enormous value in the fact that we are all playing such a fundamental role, in not only stem cell trials, but the future of a potential breakthrough in healthcare and medical science.

None of this would be possible if it were not for the Heart Cells Foundation, as we are dependent on the charity donations we receive. So please take great pleasure in what you are doing and how your donations are making a difference.

Barts Health NHS Trust



Professor John Martin

Heart Cells Foundation has had an effect on patients out of all proportion to its size. By funding trials on autologous stem cells the Heart Cells Foundation has opened up a new field of medicine. Not only will the positive results of the Foundation's research into the heart bring benefit to patients with several forms of heart disease, but they will encourage Doctors working in other fields to use autologous cells as a treatment for degenerative disease. This novel initiative will probably include disease of the brain, pancreas and joints. I, as a Professor of Medicine, am most grateful to the Heart Cells Foundation's courage and fortitude.

SUCCESSFUL "HCF" HEART STEM CELL REGENERATE TRIALS PAVE THE WAY FOR WORLDS LARGEST ADULT STEM CELL HEART ATTACK TRIAL

The BAMI study is the biggest and most comprehensive trial of its kind in the world and follows the successful REGENERATE trials. It has taken two years to get to the point where we are ready to accept patients, but we have now reached that stage and we are all very excited.

Our studies will tell us if adult stem cells from bone marrow can repair damaged hearts and, if so, how these cells should be administered to patients. Stem cells are the body's master cells. They are unique because unlike other cells, they can turn into almost any other type of cell in the body. This study will determine if adult stem cells can save lives in heart attack patients across Europe.

PROFESSOR ANTHONY MATHUR

REVOLUTIONISING MEDICINE Trial 4 – BAMI

We aim to recruit 3000 patients from across the UK and Europe. We started recruiting patients in the UK in September of last year and recently the BBC filmed our team treating the first patient in the UK with stem cells. Similar to the criteria of the Regenerate AMI trial, the BAMI trial is treating patients who have recently suffered a heart attack, injecting stem cells into the heart a couple of days later. Our leadership of the BAMI trial has come about as the direct result of the support of the Heart Cells Foundation in our own UK based trials. This is our biggest and most ambitious trial to date.

2008

Trial 2
First patient recruited

2010

Trial 3
Receives ethics approval and recruits first patient

2011

Trial 1
Recruits last patient

2012

Trial 3
Recruits last patient

2013

Trial 1
Ends 1 year follow up of all patients
Trial 2
Recruits last patient
Trial 3
Ends 1 year follow up of all patients
Trial 4
Begins, recruiting patients in Germany and UK—Largest stem cell trial for heart disease in the world

2014

Trial 1
Ends 2 year follow up of all patients
Trial 4
First patient treated in London filmed by the BBC



“By pioneering stem cell therapy we could provide truly significant benefits to thousands of people in the UK who suffer the debilitating effects of cardiovascular disease.”

Question: SO WHAT ARE STEM CELLS?

Answer: Stem cells are the body's master cells.

They are unique because unlike other cells they can turn into almost any other type of cell in the body.

There are three main classes of stem cell: **Multipotent**, **Totipotent** and **Pluripotent**

Adult Stem Cells

These are found in all of us and are considered to be stem cells that can give rise to a small number of different cell types. They are generally called multipotent.

Embryonic Stem Cells

These are derived from embryos. Specifically, embryonic stem cells are derived from embryos that develop from eggs that have been fertilised. Embryonic stem cells are totipotent and pluripotent: a fertilised egg is considered totipotent, meaning that its potential is total; it gives rise to all the different types of cells in the body.

Pluripotent Stem Cells

These are isolated from human embryos that are a few days old. They are thought to give rise to any type of cell in the body except those needed to develop a foetus.

Barts Cardiology are not carrying out any research with Embryonic Stem Cells.

What are Adult Stem Cells?

The primary roles of adult stem cells in a living organism are to maintain and repair the tissue in which they are found. An adult stem cell is an unspecialised cell (not specific to any organ or part of the body) found among specialised cells in a tissue or organ, can renew itself, and can change into the major specialised cell types of the tissue or organ.

Research on adult stem cells has found adult stem cells in many more tissues than they once thought possible. This finding has led scientists to ask whether adult stem cells could be used for transplants. In fact, adult blood forming stem cells from bone marrow have been used in transplants for 30 years.

Certain kinds of adult stem cells seem to have the ability to change into a number of different cell types, given the right conditions. If this change can be controlled in the laboratory, these cells may become the basis of therapies for many serious common diseases.

A potential advantage of using adult stem cells is that the patient's own cells could be processed in the laboratory and then given back to them. The use of the patient's own adult stem cells would mean that the cells would not be rejected by the immune system. This represents a significant advantage, as immune rejection is a difficult problem that can only be overcome by treatment with drugs to suppress the immune system.

THE TRIALS – Adult Stem Cells

Adult stem cells have been injected into patients with heart failure as well as those who are having a heart attack to see whether the damage caused by these conditions can be reversed.

Adult stem cells have been shown to have the ability to develop into new heart muscle cells and cells forming the wall of blood vessels under carefully controlled conditions in the laboratory.

Presently, most people who undergo stem cell treatment for their hearts are part of carefully regulated studies that are designed to answer the questions of safety and effectiveness of stem cell therapy.



A SUCCESS STORY

Graham Parker spoke at our Gala Film Night at The May Fair Hotel and shared his inspirational story.

My name is Graham Parker. I was one of the first of a group of volunteer patients selected to participate in the Regenerate Dilated Cardiomyopathy stem cell therapy trials.

My life was previously as a healthy 37 year old who enjoyed hill-walking and mountaineering. I was first diagnosed with Heart Failure in April 2008. My quality of life began to dramatically decrease. I visited the doctors several times and was sent away diagnosed with asthma. My lung capacity was that of an 80 yr old, and on a return visit to the doctor I fortunately saw another doctor who immediately diagnosed me with Heart Failure. I was rushed into hospital, where tests were completed. My situation became worse, and I was prescribed standard medication. I was not allowed to work for 6 months. The consultant was unable to tell me why I had this condition. I was constantly exhausted, felt extremely low in spirits and during the next year I collapsed twice. My medication was changed and I was advised to have a bi-ventricular pacemaker and defibrillator implanted as precautionary measure.

Not long after having the pacemaker fitted I read an article in the Daily Mail regarding a lady who had suffered from heart failure, had had stem cell therapy abroad and had made a full recovery. On further research I discovered the Regenerate Stem Cell research and the trials about to take place at St Bartholomew's London Chest Hospital, funded by the Heart Cells Foundation. I contacted the co-ordinator and was given the consent from my consultant giving me approval that I was in the criteria needed to volunteer for the trial.

I chose to enter the trial because as a relatively young person, I wanted to get better. I wanted to be the man I was before I succumbed to heart failure. I also wanted the trial to go ahead so that I could be part of a historical medical



procedure where others could perhaps benefit from the results. It is a terrifying debilitating condition. On the 7th December 2010 I attended St Bartholomew's London Chest Hospital as a volunteer participant and I was there for a week. The injections were like any other injections and therefore not too distressing the only fear lay in their anticipation. On the sixth day I had the procedure, I was monitored overnight and the next day released. I was told to take things easy for a week as the plug in the artery healed.

After the procedure I did not feel physically different but remained optimistic. Then my progress started, I began using the gym, I would push myself a little more each week, I went from 10 minutes to 15 to 20 to 25 and my record now is 1 hour 16 minutes running on a treadmill. When you compare the fact that I could barely walk a few yards without becoming breathless this is an astounding result.

I feel better now at 41 than I did at 21 when I joined the police force. I have a renewed sense of energy and vitality. I have gone back to university to study the degree that I have always wanted to do, archaeology. My quality of life has improved 100% and I am convinced that this is as a direct result of participating in this trial. Something radical and life changing has occurred to me.

To those who are considering donating then I can't think of a more worthy cause where you can directly and positively affect a person's quality of life. Not only that but stem cell research is the future, it is a radical and cutting edge science where there is the potential to improve the quality of many peoples' lives and possibly find a cure for a debilitating and lethal condition that affects thousands.

Graham Parker



Patient's Quotes

"I feel very unique, very lucky to be a part of this trial"

DCM Patient

"This trial has been a life-line to me, as I felt my life had come to an end. I now feel so much better since starting the trial and this has given me and my family so much hope. "

Michael 68 yrs

"I am a new person since starting the trial. I am able to do more without getting so breathless, I feel more confident and more relaxed, which has also helped my wife and family as well."

Richard 64yrs

"I am very grateful for the opportunity to take part in this very prestigious and ground-breaking trial and although I may not benefit, it will hopefully benefit people in the future and may even benefit my family in the future."

Kenneth 71 yrs

"Before starting the trial I was breathless doing most things. The other week I actually painted a barn without getting too breathless. I feel like a new person since starting the trial, thank you for having me on this trial."

John 59 yrs

"My husband is now much easier to live with since starting on your trial and is much more relaxed. He is less depressed and is now a much happier person. He is actually doing more without getting so breathless and says he now feels he has a purpose in his life. Thank you for taking him onto your trial."

Wife of Gregory 56 yrs

(Patient names have been changed for confidentiality purposes)

COOKERY DEMONSTRATION 2013

Heart Cells Foundation Cookery Demonstrations with distinguished chefs very generously giving of their time and expertise are a great success. Hosted in beautiful homes by very glamorous hostesses. The events have ranged from the art of healthy living in the home of Marcia Green, Wendy Press invited us to experience from 'Farm to Fork', followed by an exotic tour of middle eastern cuisine with Linda Dangoor and Eliska Sapera invited us to share the delights of Patricia Michelson's cheese from La Fromagerie.



TAKING YOU TO THE HEART OF CONTEMPORARY ART

An entertaining Champagne Breakfast at the home of Philippa Bradley, who shared her stunning collection of works. Andrew Renton guided us through the fascinating world of Contemporary Art.



GOLF DAY AT BROCKET HALL 16 MAY 2013

18 teams took part in the shotgun start and a good breakfast was enjoyed by all before going to their tees in the convoy of buggies.

The winning team was Gary Offenbach, Mark Offenbach, Simon Silver and Nicky Harris who we are sure will defend the title in 2014.

Brocket Hall looked after us well with a superb buffet lunch, which was followed by prize giving. We were very fortunate to have Graham Parker, one of the patients from the trials at Barts, speak to us and he gave an interesting insight as to how his life had been dramatically improved with the treatment he had undergone. Professor Anthony Mathur also spoke on the progress of the Trials.



Jane Spack, Angela and Stephen Rubin MBE, Simone Poster



Bill Curbishley, Jenifer Rosenberg OBE, Professor Anthony Mathur, Graham Parker



Esther Rantzen CBE and Louise Naftalin



Jeffrey and Susanne Nedas



Stephen and Susan James, Graham Parker



Stephen and Susan James, Philippa Bradley, Michael Bradley, Jenifer Rosenber OBE



Tony and Maggie Hatch



Soozee and Clifford Gundle

GALA FILM NIGHT & DINNER
NOVEMBER 2013

The screening of 'The Railway Man' a major coup for Heart Cells Foundation, was shown two months before the general release date at our main fundraising event of the year at The May Fair Hotel.

Producer Bill Curbishley joined us for this extremely moving film, which was followed by an equally powerful speech from Graham Parker, a patient from our stem cell trial at Barts, who related his compelling success story. The event raised £200,000 which continues to fund the cardiac stem cell research at Barts Health NHS Trust.



The Mayfair Hotel



Susan James, Antoinette Soning, Rosemary Davis, Peggy Brett, Jenifer Rosenberg OBE, Loraine Da Costa, Philippa Bradley, Louise Naftalin



Suzette Morris and Sarah Glynn



Nigel and Linda Wray



Malcolm Ozin MBE and Marilyn Ozin



Arnold Fulton, Jenifer Rosenberg OBE, Adrian Magnus



Lynne and Nigel Ross



Roger and Karen Shine



Amy-Rose Kasfiner, Claire Kasfiner, Jenifer Rosenberg OBE, Dodo Rosenberg



Sir Bernard Rix, Lady Karen Rix, Lady Young, Lord Young, Shirley Young



Lady Morven and Sir Michael Heller



Fiona and Peter Cruddas

EVENTS IN 2014



The Heart Cells Foundation will be running a series of exciting events throughout the year, please email Sara Beare at admin@heartcellsfoundation.com to be included on our invitation list.

Champagne Afternoon Tea

At the home of Susanne Nedas, a show stopping flower arranging demonstration by John Carter, one of the UK's leading floral designers with champagne afternoon tea.

Cookery Demonstration and Lunch

Demonstration with Lisa Roukin, venue and date to be confirmed.

Art Event Breakfast

Taking you to the Heart of Modern Art, to be held in a private home in London. Join us for a Bucks Fizz Breakfast, during which Andrew Renton will guide you through the world of modern art unravelling the mystery of contemporary art on 2 April 2014.

Ambassadorial Luncheons

Throughout the year a series of lunches are to be held hosted by Ambassadors at various luxurious locations including ambassadorial residences.

Closed Draw

Daphne Todd OBE, BP Portrait Award Winner will paint a portrait for the winner of the Heart Cells Foundation Closed Draw. There are 100 tickets available. The winning ticket to be drawn on 13 May 2014.

Golf Day 2014

The tenth Heart Cells Foundation Golf day will take place on Tuesday 13 May 2014 at Coombe Hill Golf Club. If you would like further information to attend or enter a team please contact Linda Watts on 020 7486 5838.

Away Day

Venue and date to be confirmed.

Patients Gathering

Annual gathering of patients who have been enrolled on our stem cell trials, along with the research team and Heart Cells Foundation on 3 July 2014.

Gala Film and Dinner at the Mayfair Hotel

The annual Heart Cells Foundation Gala Film and Dinner is planned for 12 November 2014. This event is the highlight of our fundraising calendar.

HOW TO DONATE

Heart Cells Foundation relies solely on your individual or corporate support. Whether you simply want to make a donation or help organise a fundraising event, there are lots of things you can do to help us achieve our goal.

Sign up for Gift Aid and Heart Cells Foundation can reclaim 25% of the value of your donations. As a donor you may be eligible for further tax relief on your donation.

You can now donate using a Credit or Debit Card on our website www.heartcellsfoundation.com



Founder

IAN ROSENBERG

Founder Patrons

Anonymous
Barts and The London Charity
Patsy Bloom
The Charles Wolfson Charitable Trust
Sheila and Stephen Crown
Peter Cruddas
The Doris Pacey Charitable Foundation
Dorset Foundation
Linda and Martin Fell (USA)
Joyce Freed
Janice and Peter Gold
Sir Philip Green
Susan and Stephen James
Donald Kahn
Geraldine and Gary Offenbach
Cecil Rosen Foundation
Jenifer Rosenberg OBE
Jane Spack
Nigel Wray

Patrons

Stephen and Susan James
Keith and Catherine Morris
Jenifer Rosenberg OBE
Nigel and Lynne Ross
Nigel Wray
Stephen and Laura Zimmerman

Trustees

Jenifer Rosenberg OBE (Chair)
Stephen James
Adrian Magnus
Prof John Martin
Prof Anthony Mathur
Martin Paisner CBE
Sir Bernard Rix
Prof Martin Rothman
Myra Waiman

Committee

Philippa Bradley
Peggy Brett
Rosemary Davis
Jayne Edwardes
Kaye Finegold
Susan James
Louise Naftalin
Jenifer Rosenberg OBE
Antoinette Soning
Lady Young of Graffham

Heart Cells Foundation, Suite 11, Accurist House, 44 Baker Street, London W1U 7AZ
Telephone: 020 7935 5351 Fax: 020 7487 2634 Email: admin@heartcellsfoundation.com
www.heartcellsfoundation.com

Registered Charity No: 1101727. An appeal for Barts Health NHS Trust - bringing excellence to life.

