

THE FREE FOUNDATION

MAKING A WORLD WITHOUT SCARS A REALITY

A woman with long, wavy blonde hair is shown from the chest up. She is wearing a grey tank top. Her face and arms are covered in extensive, raised, and discolored scars, particularly on her cheeks, chin, and forearms. She has a serious, somewhat somber expression.

IMPACT 20



CELEBRATING 20 YEARS OF IMPACT

Since we were established 20 years ago, we have overseen a £50 million programme of life changing medical research. We work with leading clinicians and researchers from world-class institutions across the UK to achieve our ultimate aim: scar free healing within a generation. Behind every scar is a story and we put the people living with scarring at the heart of all that we do.



OUR APPROACH TO RESEARCH

Our approach is networked and collaborative: we bring together leading scientists, engineers, clinicians and patients from the UK and beyond. By accessing the unique research resource of the NHS we focus on funding projects with clear potential for clinical impact that will ultimately improve care and bring us closer to scar free healing. We are also harnessing the power of our combined scientific strengths in pathway biology, stem cell research, comparative biology and human genetics together with those in bioengineering, physical and mathematical sciences to achieve our aim of a world without scarring.

BUILDING RESEARCH CAPACITY

We run a dedicated programme to support the next generation of researchers through capacity building Fellowships, PhD Studentships and Student Elective Awards within fields relevant to scar free healing.

Dr Adam Reid, Senior Clinical Lecturer in plastic and reconstructive surgery at the University of Manchester, was awarded a Fellowship in 2013, enabling him to fund a trainee plastic surgeon and a PhD studentship. They researched how adipose (fat) derived stem cells could be used to alleviate volume loss and scarring following reconstructive surgery. Adam is now a member of The Scar Free Foundation Research Council and oversees a busy research team within his unit. While treating the survivors of the Manchester Arena bombing in 2017, Adam gained first-hand experience of the enormous physical and psychological impacts of scarring on both children and adults.

Our strategy of providing initial funding to establish vital research programmes has led to additional grants in every area of our research. Funding from host universities as well as funders such as the Wellcome Trust and the Medical Research Council, means we have leveraged significant, additional long-term support for our research. Over the last 20 years, our investment has more than trebled by support from other sources.

“As a surgeon, scarring is always front of mind. At the moment there are more factors outside our control than within it to minimise scarring – and that’s the challenge that The Scar Free Foundation is helping to solve.”

Dr Adam Reid, University of Manchester

“The model of providing initial funding which then leads to further funding from multiple sources is highly successful.”

Dr Amber Young, University of Bristol

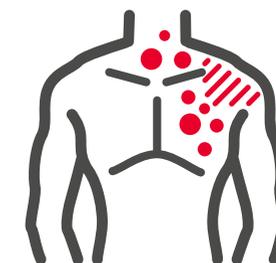
ENABLING NEW DISCOVERIES WITH FUNDAMENTAL SCIENTIFIC RESEARCH

Led by Professor Enrique Amaya, our Centre at the University of Manchester represented a 10-year, £10 million programme to advance the understanding of wound healing and tissue regeneration. It grew from just one Professor and a Secretary in 2004 to 4 labs and 45 full time employees in 2015. The Centre’s research focused on the mechanisms of wound healing and tissue regeneration in animals that heal without scars, including fruit flies and frogs. The Centre has trained 8 post-doctoral fellows, 17 post-graduate students and 20 undergraduates, producing over 45 research papers. A key discovery was the identification of the molecule produced when certain tadpoles regenerate their tails. This will impact the development of treatments to speed up wound healing in humans.

IMPROVING OUTCOMES FOR PATIENTS THROUGH CLINICAL RESEARCH

Burns research has always been central to our work. In 2012 we established two major centres for burns research in Birmingham and Bristol. These investments delivered projects that focused on delivering new clinical interventions to understand and reduce the impact of burn injuries, as well as an evidence-based major public information campaign around hot scald prevention in children.

Building on this work, in 2018 we launched the UK Burns Research Network supported by The VTCT Foundation, to deliver a collaborative programme of work aimed at better understanding patient relevant outcomes in burns and explore the genetic clues that lie behind good and bad scarring in children affected by burns.



£10 million programme to advance the understanding of wound healing and tissue regeneration

“We need psychosocial research alongside clinical research, so that we can understand how to best support those who experience difficulties as a consequence of an altered appearance.”

Professor Diana Harcourt, University of the West of England

Now a global leader in burns research, the Foundation has helped to develop the groundbreaking SPACE smart dressing that detects bacteria in burn wounds, changing colour for immediate visual diagnosis. This will avoid the overuse of antibiotics and the need for painful dressing changes to check for infection.

Patient reported outcome measures

We have collected data from over 860 adults, young people and parents of children with burns to inform clinical and psychological treatments across the NHS and future research. This study is part of an ongoing programme of research that has involved more than 1,500 people over the past 5 years.

Core outcome set for burns

Working with patients from the UK's 14 Burns Centres and clinicians from 75 countries, the University of Bristol team have recently gained international consensus to identify the seven most important outcomes that all clinicians and researchers should assess following burn injuries in adults and children. Clinical decision making can now be even better informed from a stronger evidence base.

Predicting infection

People with a major burn are at high risk of sepsis and other fatal infections, and early diagnosis is currently difficult. By tracking 150 patients with serious burns over the course of one year, the University of Birmingham discovered three markers in the blood, which together can, with great accuracy, predict sepsis on the day of injury. Following our funding, the research team has now gained further support for this important project.

Birmingham Objective Scar Scale (BOSS)

The BOSS study was undertaken to see how reliable the readings from different scar measurement tools are and to develop a score for the objective scar measurement tools. Our initial funding has led to further funding for BOSS II. This data will form an important basis for future scar therapy research.



**Working with patients from
the UK's 14 Burns Centres
and clinicians from
75 countries**



ELIZABETH'S STORY

5-year-old Elizabeth likes swimming, gymnastics, dancing and trampolining. Elizabeth was burned in a house fire when she was 6 months old.

“What the Scar Free Foundation can do is move medical treatments forward massively through research and funding so that children like Elizabeth can benefit and do things they wouldn't normally be able to do.”

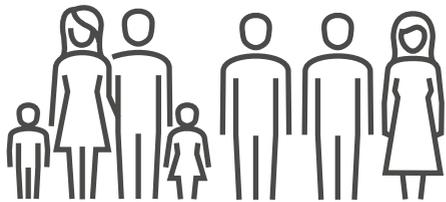
Liam, Elizabeth's father

USING LARGE SCALE DNA ANALYSIS

The Scar Free Foundation Cleft Gene Bank & Cohort Study

Cleft lip and/or palate is the most common facial birth defect, occurring in approximately 1 in 700 live births in the UK, yet the reasons why babies are born with a cleft remains unknown.

Led by Professor Jonathan Sandy at the University of Bristol, the study collects biological samples from children born with a cleft and their parents, along with demographic, lifestyle and psychological data. Over 3,000 families and 8,500 participants have been recruited since 2013, making it one of the world's largest bio banks of its kind. The Cleft Gene Bank and Cohort Study is providing unprecedented genetic and environmental insights into cleft and has enormous impact for wider scar free healing research, as it provides a valuable model to study the numerous and complex variables that affect scarring.



Over 3,000 families and 8,500 participants have been recruited since 2013

“Within a generation, we will know more about the causes of cleft, the impact of cleft on a child’s life and the best treatments, offering new hope for thousands of families around the world.”

Professor Jonathan Sandy, University of Bristol



EMILY'S STORY

9-year-old Emily was born with a unilateral cleft lip. After the operation to bring the lip together, she was left with scarring on her lip and nose. Emily's mum Rachel has been supporting The Scar Free Foundation for over seven years.

“We are creating positive change. People's lives will be enriched by the progress that is being made now and over the next 10, 20 years. It's really exciting!”

WORKING TO ADVANCE THE RECOVERY AND REHABILITATION OF VETERANS

The Scar Free Foundation Centre for Conflict Wound Research

The Scar Free Foundation Centre for Conflict Wound Research is a ground breaking national facility, undertaking pioneering research to help advance the recovery and rehabilitation of wounded servicemen and women and of civilians injured in terrorist incidents. Led by Professor Naiem Moiemem, we work in partnership with The CASEVAC Club, the injured 'unexpected survivors' from the Iraq and Afghanistan conflicts, who continue to serve by using their experiences to improve the outcomes for future conflict survivors.

1. Smart dressings for the battlefield

The Centre is conducting the first-in-man clinical trial of a new battle-ready dressing that actively prevents scar formation. Clinical trials will start in 2020 and, if successful, this product will help to improve the quality of life for military and civilian patients injured in ways that would normally result in debilitating scarring.

2. Treating historic scarring with lasers

The clinical trials - which assess the effectiveness of laser therapy to break down scar tissue from burn and blast injuries and restore lost function - began in November 2019. Our researchers are also investigating the use of lasers as a new way of delivering anti-scarring drugs.

3. Reducing the psychological impact of scarring for veterans

The first major programme of research to understand the support needs of veterans who live with an altered appearance following a conflict related injury is now underway. Our team at the Centre for Appearance Research at the University of the West of England are working with men and women who have been seriously wounded during their deployment. Researchers are developing tailored support materials so they and their families can better adjust to life with a visible difference.

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"We are committed to achieving scar free healing within a generation."
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Professor Naiem Moiemem, Queen Elizabeth Hospital, Birmingham
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SIMON'S STORY

We have had a proud history of working with veterans - not least with our Lead Ambassador Simon Weston CBE who has supported us since we started. Simon, a familiar face to many, was badly burned all over his face and body during the Falklands War.

"As people with scarring, our contribution is as valuable as all the clinicians and the researchers. The Scar Free Foundation has such a great vision. There's a heck of a lot of work to do. We need to have something in place to minimise scarring and eventually eradicate it. To end up with a scar free world, wouldn't it be wonderful?"





SIMON WESTON CBE AND ELIZABETH

Ambassadors for The Scar Free Foundation

The Scar Free Foundation

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