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Academic Health
Science Centre

THE MANCHESTER CENTRE FOR
DERMATOLOGY
RESEARCH



SECRETS OF THE SKIN

A Foreword from the Dean

I am delighted to contribute to this Dermatology focused supplement of UniLife. The supplement highlights the success of The Centre for Dermatology Research in the Faculty of Medical and Human Sciences.

The Centre was founded 21 years ago, with the appointment of Chris Griffiths to the Foundation Chair in Dermatology. Since its inception it has developed into one of the leading dermatology research groups in the world with acknowledged expertise in psoriasis, photobiology, skin ageing and hair follicle biology.

The research carried out by the Centre covers the full spectrum of translation and impact along the discovery-care continuum from basic science through to direct patient care. The Centre's sustained research output informs and influences high quality dermatology care regionally, nationally and internationally. Local patient care is delivered primarily from its base at Salford Royal NHS Foundation Trust and to the wider Greater Manchester community through a hub and spoke model of service, enabling increased patient access to dermatology services.

The Centre's commitment to quality patient care and patient centred research was most recently evidenced by its innovative and highly acclaimed Manchester Psoriasis Shout Out campaign. The week long initiative brought together clinical and administrative staff, students of all ages, patients and the public in a unique series of City-wide events aimed at raising awareness about psoriasis.

Dermatology's outstanding reputation for research excellence has seen Manchester secure large scale programme funding from UK funders such as the National Institute for Health Research (NIHR) and the Medical Research Council (MRC). The portfolio of funding extends to important collaborations with industry partners ranging from large pharma, to cosmetics companies and small biotech.

Dermatology is viewed as an exemplar by the Faculty of how to build a top quality translational research programme with a major global impact. I hope that you enjoy reading more about the Centre in this issue of UniLife.

Professor Ian Jacobs

Vice President, The University of Manchester
Dean, Faculty of Medical and Human Sciences

The importance of the skin

Skin is not a simple, inert covering but a sensitive, dynamic interface between us and the outside world. It has a range of functions, including defence against infections and infestations and protection against irritants, ultraviolet irradiation and injury. Skin is also important for controlling water and heat loss, and is an important sensory organ which distinguishes pain, touch, itching, heat and cold. Vitamin D is also synthesised in the skin.

Furthermore, the skin is an important organ of social communication and sexual contact. Western society and its associated media place a major emphasis on how people look. Perhaps the greatest disability of all is to have a lack of confidence in one's appearance, a state that has been termed 'failure of display'. There is now a considerable body of evidence about the way skin diseases result in psychological problems and a poor quality of life.

Schofield J, Grindley D, Williams H. Skin conditions in the UK: a health care needs assessment. Centre of Evidence Based Dermatology, University of Nottingham, 2009.

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FRONT COVER IMAGE: image of 26yr old female taken under normal lighting conditions and under UV light. Dark patches are an accumulation of the pigment melanin under the skin – characteristic of sundamage.

Welcome

Skin diseases are very common. In fact, I would go as far as to say that anyone reading this Unilife Supplement on Dermatology will have had a skin condition at one time or another.

The conditions themselves can range from the relatively benign to life-threatening and life-ruining. In turn, these complex conditions demand a greater understanding of their causes before leading to improved diagnosis and management. The University of Manchester Centre for Dermatology Research is one of the leading such groups in Europe and combined with the Greater Manchester Dermatology Centre based at Salford Royal NHS Foundation Trust with its well characterised patient cohorts and the large and diverse population of Greater Manchester is able to prosecute high quality, patient-relevant translational science.

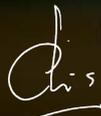
The academic department of Dermatology was established in Manchester when I arrived from the University of Michigan 21 years ago. I was the sole academic at that time...

My vision was to establish a research group, fully integrated with the clinical department, that would apply cutting edge investigative techniques and technologies to address questions arising from direct patient care – a forerunner of the Academic Health Science concept of the discovery to care continuum. For the most part we have been able to achieve this vision. This has only been possible by the excellent and dedicated scientists, clinicians and administrators who constitute the

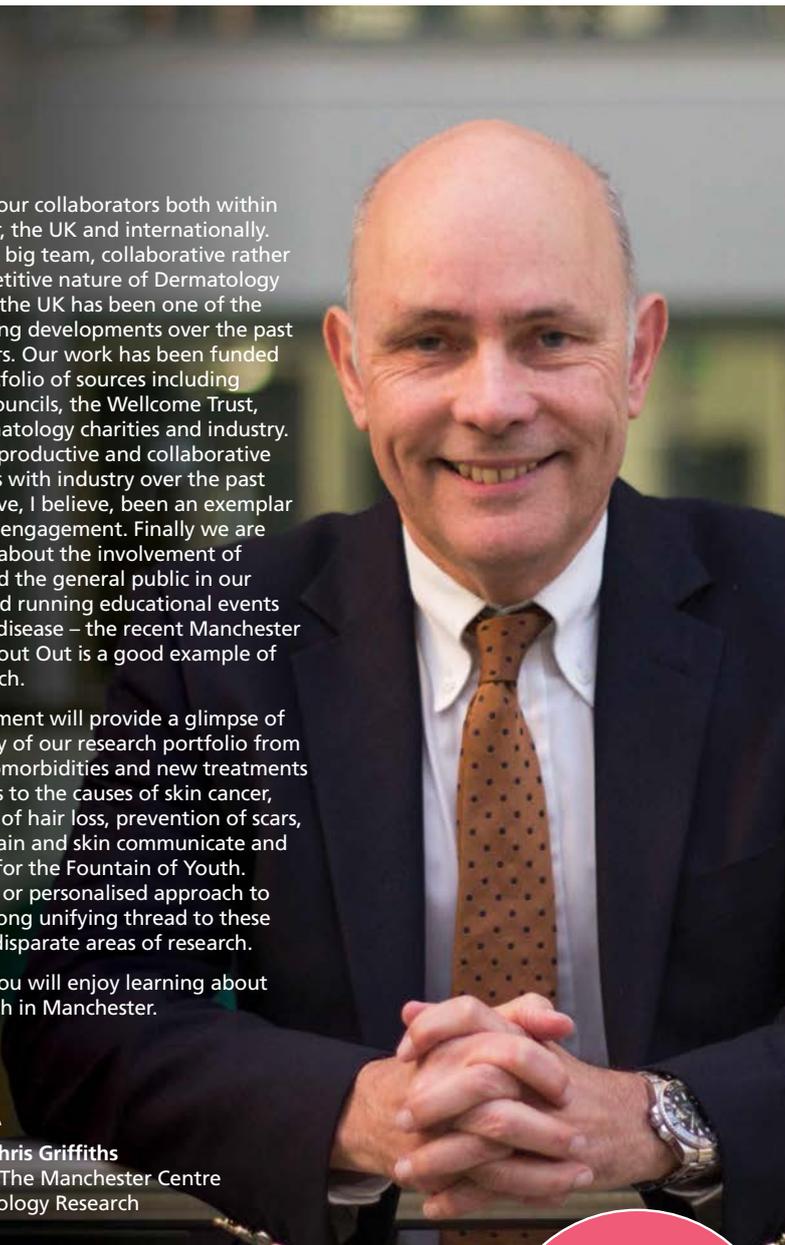
group and our collaborators both within Manchester, the UK and internationally. Indeed, the big team, collaborative rather than competitive nature of Dermatology research in the UK has been one of the most pleasing developments over the past several years. Our work has been funded from a portfolio of sources including Research Councils, the Wellcome Trust, NIHR, Dermatology charities and industry. Our highly productive and collaborative interactions with industry over the past 21 years have, I believe, been an exemplar of business engagement. Finally we are passionate about the involvement of patients and the general public in our research and running educational events about skin disease – the recent Manchester Psoriasis Shout Out is a good example of this approach.

The supplement will provide a glimpse of the diversity of our research portfolio from genetics, comorbidities and new treatments for psoriasis to the causes of skin cancer, restoration of hair loss, prevention of scars, how the brain and skin communicate and our search for the Fountain of Youth. A stratified or personalised approach to care is a strong unifying thread to these seemingly disparate areas of research.

I do hope you will enjoy learning about skin research in Manchester.



Professor Chris Griffiths
Director of The Manchester Centre for Dermatology Research



Collaborative and Competitive

As well as an extensive portfolio of industry collaborations, the Manchester Centre for Dermatology Research has a strong ethos of interdisciplinary academic collaboration, viewing partnerships across the University and with UK and international researchers as a fundamental element of its success. When comparing a selection of academics from other UK dermatology groups, Manchester performs to a higher degree of 'academic-corporate' co-authored publications.

In terms of publications and citations – a measure of academic success – the Centre outperforms many UK and international

dermatology centres. Recent citation analysis data for the period 2009-2013 shows that Manchester Dermatology is ranked second in the world for Citation Impact Relative to the World Average (1=average) and is placed fourth in the world for the number of citations in the same period.

In the future, most advances in biomedical research will be achieved through partnership between academia, industry and the NHS. In recognition of this we have appointed Samantha Ryder to the role of Head of Research Operations and Business Engagement.

4th
in the world
for number of
citations
2009-13

2nd
in the world
for citation
impact
2009-2013

65
publications
in 2013

Psoriasis is a chronic inflammatory disease that affects over 1.8 million people in the UK.

Psoriasis is non-contagious and is characterised by patches of red, flaky skin. The condition is unique to each individual patient – there are many different forms of psoriasis, and the amount of skin involved can range from tiny patches, to extensive body coverage.

Psoriasis is much more than a simple skin condition. Our comprehensive programme of research aims to address each aspect of this complicated disease, enabling us to provide high quality holistic care tailored to the needs of the individual.

What is the best treatment for me?

Are these new treatments safe?

Will my children get psoriasis?

Why have I got psoriasis?

My psoriasis flares when I am stressed, and in turn, this makes me more stressed!

People see my psoriasis - not me.

Is psoriasis linked to other health risks?

Does my opinion matter?

My hospital consultant suggested a clinical trial...

Will my children get psoriasis?

Around a third of patients have a family history of psoriasis. However, psoriasis is a complex genetic disorder- there is no one 'psoriasis gene'. It is believed that multiple small genetic effects (minor changes in certain genes) occur together to make an individual more likely to develop the condition than others. It is also possible to have this 'genetic susceptibility' and never develop the disease. Psoriasis is likely to be caused by a genetic predisposition followed by some sort of trigger, most commonly an infection, that activates the disease.

The Centre's research into this area is supported by the work of Clinical Senior Lecturer and Honorary Consultant Dermatologist Richard Warren. Dr Warren has led the team in attempts to distinguish between patients who develop psoriasis at an early stage of life (type 1 psoriasis) versus those who develop their psoriasis typically in their 50's (type 2). This work has produced ground-breaking results suggesting the genetic factors which predispose individuals to type 1 and type 2 psoriasis may be different. This has significant implications on how treatment may be approached for these two groups of patients.

Manchester's researchers have also been key players in large international psoriasis studies – published in the prestigious science journal Nature Genetics. These collaborations have so far identified 36 markers across the human genome that predispose individuals to developing psoriasis. Such discoveries aid the development of novel treatments.

What is the best treatment for me?

Research into the genetics of psoriasis is not just focused on the identification of susceptibility genes. In addition to playing a role in determining who develops the condition, genes can also affect how we respond to treatment. Early work by the Manchester team lead to the discovery that transporters that pump Methotrexate (a key systemic drug used in psoriasis treatment) out of the inflammatory cells that drive psoriasis, differ from a genetic perspective between patients who respond well to the drug and those who do not. Dr Warren received national and international prizes for this work which he undertook as part of his PhD thesis. More recently, Dr Warren and Professor Griffiths have supervised Dr Amy Foulkes on a pivotal study to determine predictors of biological drug treatment response. These data helped to secure funding for the PSORT programme of research (see across) and demonstrates the ongoing success of the Manchester team in stratified medicine.



Images taken by 31 yr old female with plaque psoriasis – before and after treatment with biologic drug under care of our dermatology team

Psoriasis Stratification to Optimise Relevant Therapy

Psoriasis Stratification to Optimise Relevant Therapy (PSORT) is a unique consortium formed by world-leading dermatologists comprising five UK universities: Manchester, King's College London, Newcastle, Queen Mary and Liverpool, 10



pharmaceutical and diagnostics companies, NHS Trusts and the National Psoriasis Association. In 2013, led by Chris Griffiths, the consortium was awarded £5million funding from Medical Research Council and an additional £2million contribution from its industry partners to carry out research into psoriasis which will directly benefit patients.

In the past 10 years there has been a dramatic improvement in clinical outcomes for patients with severe psoriasis due to the introduction of a new class of injectable drugs called biologics. These work by targeting specific parts of the immune system which are important in causing the condition. However, these drugs are very expensive (estimated annual patient cost is £10,000) and it remains the case that a significant number of patients fail to respond adequately.

PSORT aims to use existing knowledge about psoriasis, an unparalleled patient base coupled with the involvement of patient organisations, and state-of-the-art investigative tools, to develop clinical tests to help direct personalised treatments. Rather than the current system of "trial and error" prescribing, this would be of

added benefit to society as a whole since it could result in significant cost savings to the NHS and aid the pharmaceutical industry in development of new drugs.

Internationally competitive expertise exists across the consortium between investigators and collaborators in all of the scientific disciplines required to successfully deliver the PSORT programme. They have developed an extensive network of pharmaceutical and diagnostic company partners who bring specific expertise and resources to the programme.



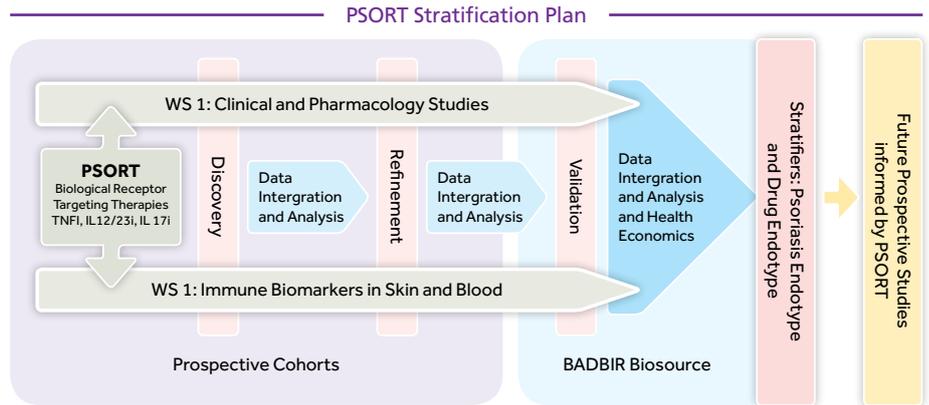
Prof Chris Bunker – President of the British Association of Dermatologists speaking at the PSORT launch

Not only will this help in achieving the short term goals but it will also provide the necessary platform for translating the outcomes into clinically useful tests. Moreover, the results from PSORT will inform the management of other less accessible immune-mediated inflammatory diseases, potentially delivering even greater health care savings. **continued >**

PSORIASIS RESEARCH /

Open collaborations, such as PSORT, are a vital dynamic platform for inward investment to UK plc and create new possibilities for innovation in dermatology. Benefits to psoriasis patients, such as Lydia Warner, aged 50, from South Wales, could be transformational. Lydia began having symptoms aged 25, and for years experienced 'trial and error' prescribing for her psoriasis before finding a biologic therapy that works for her. She said: "Research like this is crucial as it will help stop patients going through what I've been through and will mean they get the treatment that is right for them earlier- letting them concentrate on their lives."

The 10 pharmaceutical and diagnostics companies involved in the study are: Abbvie, Becton Dickinson, Celgene, Janssen, MedImmune, Novartis, Pfizer, Qiagen, Sanquin and Steifel/Glaxosmithkline. NHS partners include Guy's and St Thomas' NHS Foundation Trust, Campbell Family and Mental Health Research Institute and Greater Glasgow Health Board.



The PSORT programme was launched officially by the President of The University of Manchester, Professor Dame Nancy Rothwell, at the Imperial War Museum North on 29 April 2014.

For more information: www.psort.org.uk

“Benefits to patients could be transformational”

Are these new treatments safe?

BADBIR

The British Association of Dermatologists Biologic Interventions Register (BADBIR) is a UK and Ire wide observational study which aims to assess the long term safety of biologic treatments for psoriasis.

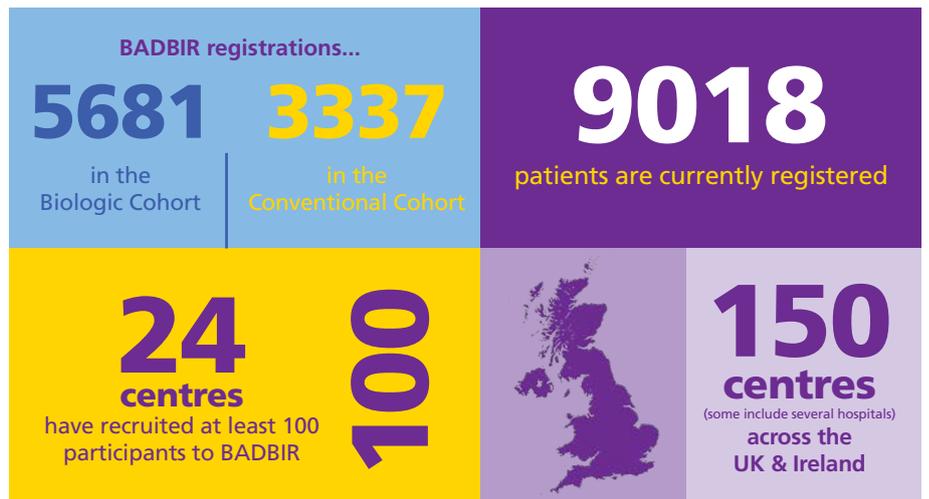
Biologic therapies are a relatively new class of medications that can reduce inflammation by targeting over active cells in the immune system. These treatments are usually used for patients with severe psoriasis that have not responded to other medications.

BADBIR is funded and managed by the British Association of Dermatologists (BAD), who in turn receive support from the pharmaceutical companies who manufacture the biologic therapies. BADBIR is co-ordinated by a team at The University of Manchester managed by Dr Kathy McElhone.

Although biologic treatments have been tested in clinical trials and are prescribed for treating psoriasis, clinical trials cover a relatively short time period and there is still a need to monitor any side effects when used long term in clinic.

BADBIR monitors patients receiving biologic therapies for psoriasis and a second group who are receiving conventional therapies.

Patients who consent to participate complete questionnaires assessing the impact of psoriasis on quality of life, mobility, smoking status, and alcohol intake at regular intervals during routine attendances at a dermatology clinic.



A dermatologist or nurse records the psoriasis severity, concomitant therapies, any relevant medical history and details of any illnesses or adverse events. The study data are entered onto a secure web-based database.

Recruitment started in 2007 and will continue until 2017. Over 150 hospitals from the United Kingdom and Republic of Ireland are involved and more than 9000 patients to date have agreed to take part. By participating in BADBIR, patients are making a valuable contribution to research and the future treatment of psoriasis.

Biologic Group	Systemic Group
Adalimumab	Acitretin
Etanercept	Ciclosporin
Ustekinumab	Fumaric Acid Esters
	Methotrexate
	Oral PUVA

More than 9000 patients are now registered.

www.badbir.org

The rates of adverse events in the two groups will be compared to see if there are any differences. This will help to inform medical professionals about the long term safety of both biologic and systemic therapies for psoriasis and enable more accurate and better quality information for patients commencing these treatments.



Why have I got psoriasis?

Psoriasis occurs when the process by which the body produces skin cells is accelerated. It is thought the increased production of skin cells is caused by a problem with the immune system. The immune system is your body's defence against disease and infection, but in people with psoriasis it attacks the healthy skin cells by mistake.

The Centre for Dermatology Research works with Professor Ian Kimber and his laboratory team in the Faculty of Life Sciences to investigate the function of Langerhans cells (LC) in psoriasis. LC are a type of immune cell found in the epidermis, the outer layer of the skin.

Due to their location, LC are one of the first immune cells that pathogens will encounter when entering the body via

the skin. After activation, following encounter with a micro-organism for instance, Langerhans cells move from the skin, via the lymphatic vessels, to local lymph nodes, where they initiate, and later regulate, immune responses. To study LC function we take small skin biopsies from volunteers with psoriasis, isolating the epidermis and visualising the Langerhans cells using microscopy, and compare samples with those from healthy skin volunteers. Professor Kimber's laboratory has established that patients with the most common form of psoriasis, chronic plaque psoriasis, have completely impaired Langerhans cell function. In individuals with chronic plaque psoriasis Langerhans cells fail to migrate away from the epidermis after receiving activating signals that normally induce migration in individuals with healthy skin.

The team has recently investigated LC function in another type of psoriasis, guttate psoriasis (a form characterised by small droplet shaped lesions), that can develop after a streptococcal throat infection. After an episode, guttate psoriasis clears completely in some

patients, whereas others go on to develop chronic plaque psoriasis. The group has looked at LC migration in different groups of volunteers and found that subjects who have a current episode of guttate psoriasis have some impairment in LC mobilisation. Importantly, the ability of Langerhans cells to migrate mirrors the progression of the disease. Guttate psoriasis patients that develop chronic plaque psoriasis display a total loss of LC migration. In contrast, volunteers in whom their psoriasis resolves display a complete restoration of LC migration.

We have established that some systemic treatments for psoriasis restore normal LC function. It is thought that the inability of LC to migrate in patients with psoriasis is due to changes in the local epidermal environment. Current investigations in the laboratory are now focused on examining the altered epidermal environment in psoriasis, understanding the mechanisms involved in controlling LC migration, and identifying the factor or factors that impair Langerhans cell migration in psoriatic skin.

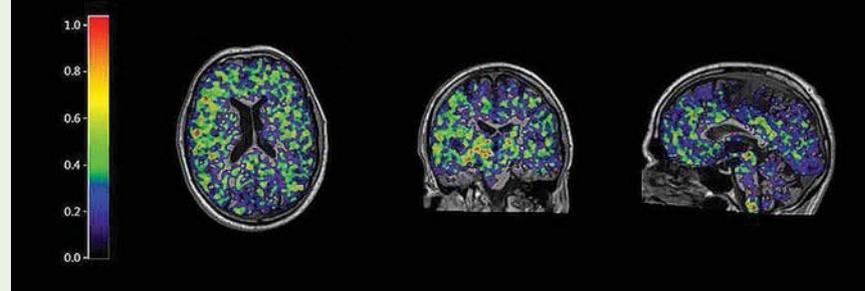
My psoriasis flares when I am stressed, and in turn, this makes me more stressed!

The dermatology research community is showing an increasing interest in the interaction between the brain and the skin. Such interest has stemmed from the knowledge that several chronic inflammatory conditions of the skin (e.g. psoriasis, eczema and acne) may be provoked or exacerbated by psychosocial stress. Furthermore, it is well documented that these conditions themselves have a significant impact on the psychological wellbeing of the individual and cause significant distress.

Manchester has been leading the way in increasing understanding of the brain-skin connection with several high-impact publications. It has been the research area of focus for the Dermatology Centre's Dr Elise Kleyn and formed the basis of her PhD thesis.

"Our research group has been interested in both ends of the Brain-Skin axis. At the proximal end, using cutting-edge technology (positron emission tomography) we have investigated whether or not the systemic

Positron Emission Tomography (PET) scan showing neuroinflammation in the brain of a patient with psoriasis.



inflammation associated with psoriasis induces neuroinflammation of the brain. Clinical Research Fellow Dr Hamish Hunter, received recognition of this work by winning the best poster presentation for the faculty of Medical and Human Sciences at the inaugural University of Manchester Postgraduate Summer Research Showcase. Focusing on the distal end of the axis we have investigated the effect of an acute experimental stressor, such as public speaking, on the expression of various cutaneous genes and on the function of specialist immune cells in the skin; namely, Langerhans' and mast cells. Finally, we have investigated the interaction between these immune cells.

Ongoing work in a long-standing collaboration with Professor Rebecca Elliott and Dr Shane McKie from the Neuroscience

Psychiatry Unit includes the Psoriasis and Emotions Research Study (PERS), undertaken by Dr Emma Mullings, which is utilising Functional Magnetic Resonance Imaging (fMRI) to investigate how people with psoriasis respond to different emotions compared to people who don't have a skin condition. In addition, in collaboration with Dr Matthew Harries, Consultant Dermatologist, we are similarly investigating responses in patients with alopecia areata.

It is our hope that an enhanced understanding of the brain-skin axis will ultimately benefit patients with a wide range of dermatological conditions by improving disease management."

Dr Elise Kleyn, Consultant Dermatologist and Honorary Senior Lecturer

People see
my psoriasis -
not me.

Is psoriasis
linked to other
health risks?

IMPACT

The Identification and Management of Psoriasis Associated Comorbidity (IMPACT) research programme is a collaboration between The University of Manchester, Salford Royal NHS Foundation Trust and the Psoriasis Association. IMPACT launched in September 2010 with a mission to apply the best quality research knowledge to devise responsive services to improve the care of, and outcomes for, people with psoriasis. Our current programme is supported by an award from the National Institute for Health Research in the form of a five year Programme Grant for Applied Research.

Many view psoriasis as a relatively straightforward skin condition, but this is far from the case. Psoriasis is a long-term, complex and sometimes life-ruining inflammatory condition. It can be challenging to live with a potentially stigmatising and visible skin condition and we see many individuals who respond by avoiding or limiting social contact.

Our team was alert to the accruing evidence suggesting that people with psoriasis were at high risk of acquiring a wide range of additional physical and psychological conditions. In response we have brought together an interdisciplinary team of experts to investigate the most likely causal explanations for these comorbidities, and to then identify the best evidence-based interventions to support patients to manage psoriasis, limit the impact of comorbidities or even prevent them altogether.

The IMPACT programme has brought together those with extensive prior experience of psoriasis (as patients, researchers or clinicians) with those new to the area, but with skills that have proved highlight relevant- these include diabetologists, rheumatologists, pharmacists, epidemiologists, methodologists, general practitioners and statisticians. We have also been 'growing our own', and postgraduate researchers with expertise in new areas such as risk communication, medicine adherence, and cardiovascular fitness are bringing new ideas into the mix.

The IMPACT vision is one which aims to increase recognition by healthcare providers of the challenges of living with psoriasis, to highlight the value of multidisciplinary research and healthcare provision, to support evidence-based training and interventions, and ultimately to improve the short, medium and long-term physical and psychological well-being for people living with psoriasis.



impact
P S O R I A S I S



IMPACT team leads, from left to right: Alison Littlewood, Dr Chris Bundy, Prof Chris Griffiths and Dr Lis Cordingley

Here's a summary of what we've been up to over the past 4 years...

Phase One

In the first three years of the programme, four work packages simultaneously collected information on:

- How common additional health conditions are in people with psoriasis, such as depression and cardiovascular disease (CVD) including heart attack and stroke.
- The links between CVD and psoriasis, and how this risk is communicated to patients by healthcare practitioners.
- Adaptation to psoriasis – what coping strategies are used by people with psoriasis to deal with physical and psychological demands of the condition, and which are most effective.
- The barriers encountered by practitioners to providing effective behaviour change interventions to support patients with psoriasis.

Phase One findings

Initial findings suggest that:

- Depression and obesity is common among those with psoriasis
- CVD is more common in people with other conditions also associated with psoriasis.
- High quality skin assessment is relatively rare outside specialist centres. Patients want to have their skin examined by their practitioner with additional engagement about the debilitating impact of living with psoriasis.

- Patients want help with managing levels of distress associated with having psoriasis.
- Patients want long-term plans for management of their psoriasis, including clear referral pathways and swift access to specialists.

Health professionals vary in their confidence to manage psoriasis as a complex long-term condition, and recognise that there is a training need. The information collected so far has been combined to ensure the development of Phase Two is based on the most up-to-date evidence.

Phase Two

The team is developing and piloting:

- A highly-focused, brief but intensive training programme designed for healthcare practitioners so that they can work in a more targeted way with patients to reduce the impact or likelihood of developing psoriasis associated co-morbidities.
- Personally relevant materials to broaden people's understanding of psoriasis and psoriasis treatments which then empower them to live well.

We are currently recruiting healthcare practitioners and people with psoriasis to help assess the feasibility and acceptability of the new training and materials.

Email: alison.j.littlewood@manchester.ac.uk
www.impactpsoriasis.org.uk

[@impactpsoriasis](https://twitter.com/impactpsoriasis)

Investing in the next generation

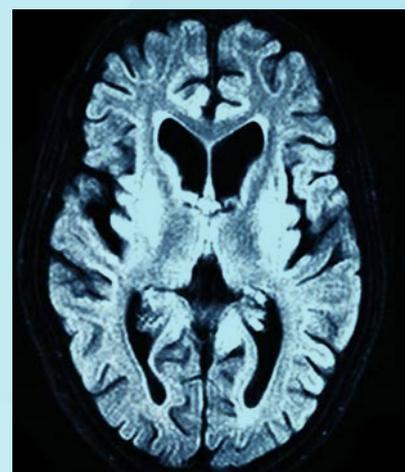
Within the IMPACT team there is a thriving group of early career researchers including PhD students and post-doctoral researchers. In addition to being able to gain support from other team members and learn from their expansive expertise, being an early career researcher at IMPACT also provides opportunities to produce high quality work and disseminate this upon international stages. For example, Chris Keyworth (a third year PhD student) presented his work on risk communication and psoriasis at the recent 13th International Congress of Behavioural Medicine, Groningen, The Netherlands. A number of other early career researchers have also been invited to present work at national and international conferences and have been able to lead and collaborate on various papers submitted to peer reviewed scientific journals.

In addition to facilitating the development of a strong research portfolio, IMPACT has also supported early career researchers to gain access to prestigious training opportunities. For example, earlier this year Anna Chisholm (post-doctoral researcher), attended an advanced Motivational Interviewing training course run by numerous international leaders in the field. Run in Cardiff, Swalec Stadium, this training event allowed Anna to learn and practice complex

motivation enhancement skills, and training skills which has directly informed the IMPACT research project. Ongoing training opportunities exist for all early career researchers including programmes and workshops on topics such as qualitative and quantitative research methodology, IT skills, psychological interventions, and long-term conditions management interventions.



Dr Anna Chisholm with her research poster at the recent European Health Psychology Society conference in Austria



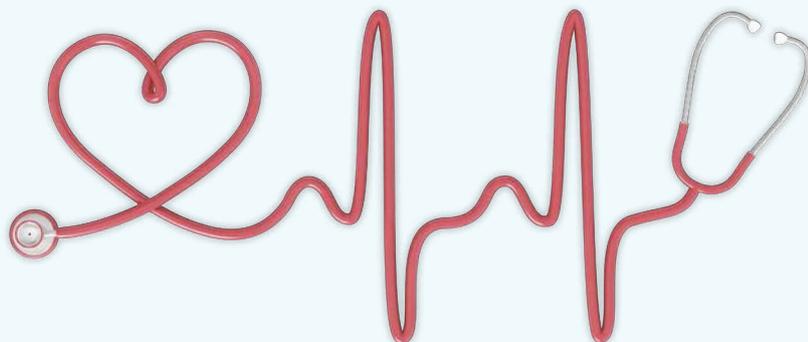
Mind over Matter: Psychodermatology

The Centre for Dermatology Research in Manchester has a track record of work in psychodermatology – indeed we developed the first ever integrated psychology and dermatology approach to skin care management anywhere in the world. This is a relatively new 'specialism' for Dermatology and Behavioural Medicine, but key areas of activity are examining how beliefs (about illness and treatment), mood and behaviour influences skin and immune system functioning. For instance, our early research tested how Cognitive-Behaviour Therapy (CBT) influenced psoriasis, and found that with CBT well-being improved, as did the time to skin clearance. Mood has a big impact on peoples' behaviour and motivation to self-manage a condition like psoriasis, so the benefits of early and appropriate treatment for the right people are substantial.

The evidence that stress dysregulates the immune system and compromises health has been gathering over the last 10 to 15 years. There is now little doubt about the central role of perceived stress in down-regulating the immune system and delaying wound healing across animal and human studies in both non-clinical and clinical populations. This emerging area is known as psychoneuroimmunology. Professor Griffiths and his team have been running studies on the impact of stress on emotions and skin cell functioning in psoriasis and these studies are helping to understand that crucial link between how people feel and what is happening in their skin condition. This will lead to further research on which therapeutic approaches to stress reduction are best for which people.

We are all looking forward to developing a new and exciting period of interdisciplinary research collaboration that looks at all aspects of skin disorders.

Dr Chris Bundy
Senior Lecturer in Behavioural Medicine and (Hon) Consultant Health Psychologist.



Heart health and psoriasis

Growing evidence suggests that psoriasis is associated with an increased risk of cardiovascular (CV) events, such as a heart attack or stroke. However, it is uncertain as to whether psoriasis itself is an independent risk factor for CV diseases, or whether it is the high prevalence of risk factors (such as obesity and lack of exercise) in these patients which are driving CV risk.

Psoriasis can be extremely uncomfortable for sufferers; people often have itchy or painful skin. Patients with psoriasis may also be embarrassed about exposing their skin in front of others. These kinds of barriers may lead to patients avoiding physical exercise.

Lisa Auker, a final year PhD student, is working under the supervision of Dr Helen Young, Clinical Senior Lecturer and Honorary Consultant Dermatologist, to further investigate the link between psoriasis and

CV risk. More specifically, they are looking at exercise engagement in patients with type 1 psoriasis (those whose psoriasis started before the age of 40).

This research is using a cohort of patients with psoriasis (~379 patients to date) to explore the link between psoriasis specific experiences and self-reported patterns of exercise, and how they might contribute to CV risk. Participants within this project are also undergoing a heart investigation whereby their pulse wave velocity (PWV – a measure of arterial stiffness) is measured. Additional work is being done to identify useful biochemical markers in the blood which may predict the future development of CVD.

Lisa and Dr Young will be presenting at the 7th International Congress of Psoriasis: From Gene To Clinic in December this year.

Does my opinion matter?

Yes, your opinion matters!

The Manchester Centre for Dermatology Research has strong links with patient groups and aims to give patients a voice at every stage of the research process. We work very closely with The Psoriasis Association - the leading charity and membership organisation for people affected by psoriasis.



Helen McAteer

Manchester Centre for Dermatology Research and the Psoriasis Association – supporting research, supporting patients

Research into psoriasis conducted at and by the Centre for Dermatology Research is world renowned, and world leading. The Psoriasis Association has a long-standing relationship in funding research carried out by the Centre, in addition to collaborating with, and being involved in studies. It is through the mutual respect that exists between academics, researchers, clinicians and patients that has allowed our knowledge of psoriasis to grow. By recognising the need to have patients at the heart of research the Manchester Dermatology Centre has sought to answer real life questions of those affected most by psoriasis – those living with it.

The Psoriasis Association has been privileged to be involved from inception of two significant programmes of research into psoriasis, based in Manchester – IMPACT and PSORT. As a patient support organisation we have long recognised and spoken about the psychological and social impact the condition can have – it was a big step forward to bring together such a diverse group of researchers and health professionals as the IMPACT team, but the questions that they seek to address are of great significance to patients. The knowledge that we hope to gain from PSORT will in turn help to improve the

patient journey of treating this long-term condition, and again it is refreshing to know that the voice of the patient will not go unheard.

We also feel it is important to support the next generation of psoriasis researchers- PhD students.

Following extensive review by the Medical and Research Committee of the Psoriasis Association, and the external peer reviewers, we were delighted to award four PhD Studentship Grants at the end of March 2014. Three of these were awarded to researchers based within Manchester's Dermatology Centre. We believe that these projects will further the genetic and psychological understanding of this complex condition and provide each PhD Student with an excellent platform for future research in psoriasis. We wish the Principal Investigators and PhD Students every success in their work, and look forward to learning from their findings.

Helen McAteer
Chief Executive
Psoriasis Association



Psoriasis Association Studentships 2014

Dr Chris Bundy Psoriasis and sleep deprivation



The appearance of psoriasis and scaling can be very distressing; some patients say the itch and soreness of plaques stops them sleeping well. We don't know how widespread the problem is. This aspect of psoriasis is under-recognised by health care staff and consequently is poorly managed. The project will: (1) comprehensively assess whether sleep disturbance is a significant problem in people with psoriasis; and (2) test an existing on-line method to improve sleep quality in people with psoriasis.

Dr Elise Kleyn Neuropsychological morbidity in psoriasis



Our previous work has shown that patients with psoriasis process facial expressions of disgust differently to individuals without skin disease. This PhD project will use state-of-the-art brain scanning, questionnaires and laptop based tasks to investigate whether treating psoriasis lesions effectively will change this altered processing of disgust in some patients. Patients' reactions to pictures of their own psoriasis lesions and those of others will also be studied in a separate group of patients who have had psoriasis for varying lengths of time. Understanding the brain-skin connection is key to developing new approaches to help treat the psychological and other brain effects of psoriasis.

Dr Richard Warren An investigation into genetic factors which discriminate psoriasis from psoriatic arthritis



Psoriasis is complicated by an arthritis, known as psoriatic arthritis (PsA) in approximately 25% of cases. It is well known that patients who have psoriasis have a genetic predisposition to the condition. What is not understood is which genetic factors influence who will develop psoriasis that remains confined to the skin versus those individuals who will go on to develop PsA. This study will involve a large scale genetic investigation comparing and contrasting the genetic makeup of individuals from these two sub-groups. A greater understanding of the genetic factors which influence these two potential outcomes would be very helpful in: 1 – trying to devise ways to prevent the onset of PsA; and 2 – targeting specific individuals with more appropriate treatments.

My hospital consultant suggested a clinical trial...

Dermatology Clinical Trials

The Dermatopharmacology Unit has an international reputation for research into major skin diseases and is one of Europe's leading dermatology clinical trial units. The team have a diverse research portfolio ranging from state-of-the-art biologic therapies, to anti-ageing treatments for wrinkles!

Based at Salford Royal NHS Foundation Trust, the purpose designed, patient focused Unit has grown significantly since its inception in 1994, and comprises a strong team of researchers, research nurses and support staff.

Patients and healthy volunteers participate in our research for a variety of reasons – personal and altruistic – to access novel treatments to improve their own condition and to benefit others by helping to test new treatments for current and future patients. The work is divided between contract industry-funded clinical trial research assessing new therapies for skin disease, and academic-led basic science dermatopharmacology studies and tissue procurement.



“Since taking part in research my psoriasis has cleared- totally changing my life. Many thanks to the research centre!”
Peter, research volunteer

The Unit's resources and diverse expertise are in demand. In August 2014 the team were conducting 13 industry sponsor-led trials alongside three observational and six academic-led studies. This includes trials into potential treatments for a variety of conditions including psoriasis, eczema and basal cell carcinomas – ranging from early phase



experimental medicine (phase I/II) to later phase (III/IV) efficacy trials. Academic studies include investigations into Langerhans cells in psoriasis, the genetic basis of acne, and the molecular genetics of adverse drug reactions. The Unit also supports the clinical activities of the skin ageing group.

The Dermatopharmacology Unit is further expanding its portfolio. New areas of work are to include trials for potential treatments of alopecia and a study aiming to increase understanding of the inflammatory environment of the scalp in seborrhoeic dermatitis.

How does the sun affect the skin?

How much sun is good for us?

Photodermatology

Photodermatology is a core area of research activity within the Centre for Dermatology Research. Led by Professor Lesley Rhodes, the team have particular focus on the identification of cutaneous biomarker responses for prevention and treatment in sunlight-induced inflammatory conditions and related longer-term disorders. This includes determining the hazards (inflammation, photosensitivity, skin cancer) and benefits (particularly vitamin D synthesis) of the skin's exposure to sunlight, and the positive influence of nutritional and medicinal intervention.



Members of the photobiology team

Sunlight has important health impact on the skin and this is increasing through behavioural change. Patient care has been enhanced through translation of research findings to national treatment and prevention guidance including through Lesley Rhodes' roles on the board of Public Health England – Advisory Group on Non-ionising Radiation and NICE – Public Health Advisory Committee. The group's research has been pivotal in developing a first-in-class photoprotective drug for photosensitivity.

The research attracts top quality peer-reviewed funding, most notably the European Union, Department of Health, Cancer Research UK, Action Medical Research and the British Skin Foundation, and most recently the Biotechnology and Biological Sciences Research Council (BBSRC) and Worldwide Cancer Research (formerly AICR). investigations are prosecuted through long-running internal collaborations with the School of Earth, Atmospheric and Environmental Sciences, Institutes of Human Development and of Population Health, and the Manchester Pharmacy School, and also externally throughout the UK and Europe. There is an excellent record of training programmes including BBSRC CASE PhD studentship, MD studentship, and research attachments leading to peer-reviewed publications.

Lesley Rhodes was given the high accolade of being elected to President of the European Society for Photobiology (2013-15)- the leading international scientific society for research into sunlight effects in health and disease, and the utilisation of non-ionising radiation in health technology.



Skin ageing research at Manchester

Today, our Centre for Dermatology Research is renowned world-wide for its programme of skin ageing. It all started whilst in Michigan some 25 years ago when an interest in ageing led Chris Griffiths to build a portfolio of research into skin ageing and repair utilising topical retinoids. Consequently, changes to population demographics were already recognised as an important health challenge at the inception of the Centre for Dermatology Research in 1994 enabling Chris to build on his prior work.

Research in the area of cutaneous ageing began that year – a collaboration between Chris and Professor Cay Kielty and Dr Adrian Shuttleworth (Life Sciences) to examine the role of the skin's elastic fibre network in skin photoageing. The Research Assistant employed on the project, Dr Rachel Watson, identified that loss of fibrillin-rich microfibrils – key elements of the elastic fibre system – were significantly remodelled in photoageing and that this remodelling occurred early in pathogenesis of the condition.

Twenty years on, Dr Watson is leading cutaneous ageing research at the Dermatology Centre. Understanding how medical treatments for photoageing achieved improvements in skin condition has also been

a focus for the Manchester group. Pioneering research identified that fibrillin-rich microfibrils – a glycoprotein, which is essential for the formation of elastic fibers found in connective tissue – were central to the partial repair of the skin following treatment with the clinical gold standard, all-trans retinoic acid. The team subsequently developed a short-term in vivo assay, the 'Manchester patch test assay', to test the effectiveness of anti-ageing medicines and cosmetic products against this gold standard. Such testing is now used extensively by the personal care industry as a pre-screen prior to clinical trials of skin repair efficacy.

Recent work, performed in collaboration with Dr Michael Sherratt, has examined the ultrastructure of these critical macromolecular assemblies, showing that changes occur not only to where these assemblies reside in the skin, but also to their fundamental structure. Drs Sherratt and Watson collaborate extensively with University colleagues in the Faculties of Life Sciences and Engineering & Physical Sciences, researching age-related changes to soft tissue mechanics using nanoindentation (an MRC-funded project led by Professor Brian Derby) and using the Henry Moseley X-ray imaging facility (in collaboration with Professor Phil Withers) to interrogate 3-dimensional skin structures.

Alliance Boots and Manchester's Dermatology Research Centre renew partnership

Alliance Boots and The University of Manchester have renewed their partnership in order to build on the highly successful work already achieved between the two organisations. This new five year partnership, which will run until the end of 2018, aims to further investigate the mechanisms by which human skin ages and, in turn, help boost innovation within Boots product brands.

The partnership will continue to examine both the intrinsic characteristics of skin ageing and the effect the environment has in accelerating the process. Furthermore, this new programme will explore causes of accelerated skin ageing such as inflammation, as well as investigating ageing in people of different ethnicities. The programme will also examine the effect of anti-ageing technologies, including beauty devices, to help deliver faster and higher quality outputs.

Over the past five years, Alliance Boots and The University of Manchester have achieved a strong publication record creating two patents, 29 published academic articles showcasing new findings in high impact dermatology journals – with seven more in preparation. In addition, work has been presented at 20 international conferences. The partnership has also enabled Alliance Boots to further meet customer needs through the development of its highly regarded product brands, while ensuring a leading competitive advantage within the anti-ageing skincare category.

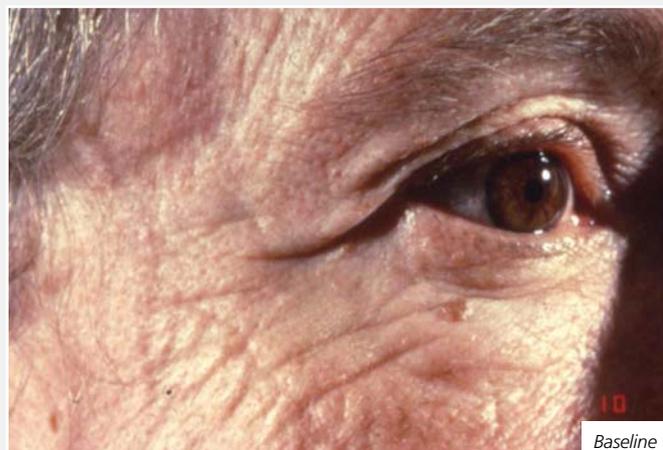
The teams' research has contributed to the success of all generations of No7 anti-ageing serums and the No7 skincare range as a whole. The recent launch of the No7 Protect & Perfect ADVANCED Serums illustrates how insights around new ageing markers, new tools to assess technology performance and a better understanding of how existing technology works have helped to successfully evolve Boots product brands.



Dame Nancy Rothwell and Professor Ornella Barra

Professor Ornella Barra, Chief Executive, Wholesale and Brands, Alliance Boots, said: *"We are extremely excited to be partnering with The University of Manchester for a further five years. We have already achieved great success with the University and I believe, together, we will become a global leader in skin ageing research, which will help further drive the internationalisation of our product brands."*

Female patient treated with Retinoic Acid 0.1% showing significant repair of photodamaged skin.



Avoiding a cosmetic crisis – fighting against the trivialisation of cosmetic procedures

The deregulation of cosmetic procedures such as Botox® and dermal filler injections, as well as type 3 and 4 laser treatments in 2010, caused alarm in the dermatological community. Careful regulation of many procedures developed for the treatment of disease ceased to exist, as long as the indication for treatment was branded as “cosmetic” and could legally be delivered by anyone. This caused great concern for patient/consumer safety amongst dermatologists as the boundaries between disease and “cosmetic” are often blurred, and inherent risks of a procedure itself often remain despite a “cosmetic” indication.

An audit was piloted in the North West and subsequently rolled out to all members of the British Association of Dermatologists, which highlighted that dermal filler injections and laser/light procedures were those associated with the most chronic or permanent side

effects, as well as the most debilitating/life ruining adverse events. This data contributed to the Review of the Regulation of Cosmetic Interventions, commissioned by the DoH and led by Sir Bruce Keogh in response to the PIP breast implant scare. The Review highlighted shortcomings in the cosmetic interventions sector, underscoring serious consumer safety issues relating to the nearly £3 billion nonsurgical sector. The Review called for improved training frameworks for all practitioners engaging in these procedures under the mandate of Health Education England.

In response, the Centre for Dermatology Research, in partnership with Salford Royal NHS Foundation Trust, has developed a first-of-kind multi-disciplinary Diploma and MSc in Skin Ageing and Aesthetic Medicine. The course launched in September 2014 and is led by Dr Tamara Griffiths and Dr Minal Singh.

Aimed at consultants, doctors, dentists, and specialist trainees, this initiative is aligned with the Keogh recommendations for improved standards for training and education of nonsurgical procedures. The unprecedented level of interest, with the inability to accommodate over 50% of applicants despite doubling of the class intake, attests to the need of such high quality training in a sector where critical thinking and scientific evidence is often lacking.

This programme is a major step forward in provision of high quality, comprehensive training in the area of skin ageing and aesthetic medicine. Its multi-disciplinary, University-based approach is unique, and provides a genuine opportunity for those committed to furthering their knowledge and raising standards of care. For further information, please see:

www.manchester.ac.uk/mhs/skinageing

Skin care is much more than looking youthful

We celebrate longevity and population ageing which is arguably the greatest achievement of the 20th century. Globally, life expectancy at birth has increased by more than 30 years over the last century. Every second two people in the world celebrate their 65th birthday¹. Within a single century, (1950-2050) the number of those aged 80 and above will have increased 26 fold, from 14 million to 379 million².

As we age, our skin becomes more fragile and is affected by everyday activities, environmental factors and medical conditions. One out of every two people over the age of 65 is affected by an intense dryness of the skin – xerosis³. This common condition in

ageing can cause pruritus, eczema, infection and wounds. Personal awareness and prevention measures can greatly reduce risks which is why on 23 June 2014, global ageing and dermatology experts came together for the first time at the **2014 Manchester Summit, “A Life Course of Active Ageing and Healthy Skin: Identifying Challenges and Seizing Opportunities”**.

At this meeting, hosted by the University of Manchester's Centre for Dermatology Research, the delegates of the Manchester Summit set forth a vision in which a life course approach to skin health; promoting skin health in an individual's quality of life, acknowledging its social value and providing

a basis for cutaneous ageing as a source of economic growth. To achieve this vision, the delegates committed to engaging in partnerships and interdisciplinary collaboration focused on research, education and training, innovation with practical applications and powerful communications that ensure healthy skin – the largest organ in the body – is a priority for 21st-century active ageing.

¹ *HelpAge International and UNFPA, 2012. Ageing in the Twenty-First Century: A Celebration and a Challenge. London and New York, p. 12.*

² *United Nations Department of Economic and Social Affairs, 2013. World Population Ageing, 1950-2050.*

³ *Clin Dermatology, 2011; Paul et al. Dermatology 2001.*

Hair Research

Diagnosis, therapy, and translational research into hair diseases is one of the main foci of interest for the Centre. Work is split between the newly founded Hair Clinic at Salford Royal NHS Foundation Trust, and scientists based in The Centre for Dermatology Research.

Directed by Professor Ralf Paus, the hair research laboratory focuses on research topics and experimental models that are of immediate relevance to human hair growth disorders. Funded mainly by industry and BBSRC, the lab supports 5 externally funded PhD students, 4 post-docs, 3 technicians and is complemented by international visiting fellows. Current investigations include two models of inflammatory hair diseases (alopecia areata and lichen planopilaris) and research into chemotherapy-induced hair loss.

Research in the Centre is at the forefront of its field. The team have close connections with leading patient organisations, including the National Alopecia Areata Foundation (NAAF, USA), and regularly engage with the media to highlight important progress in hair research (having recently featured on Radio 4 and BBC World Service).



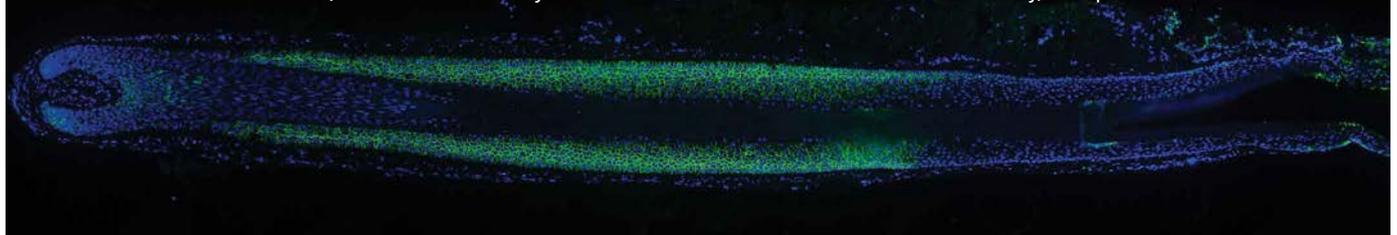
Female patient with alopecia areata at Manchester Hair Clinic showing good regrowth following dithrocream therapy.



Professor Paus is one of the most internationally renowned authorities in basic and applied hair research and edits Europe's leading experimental skin research journal, *Experimental Dermatology*.

Laboratory work is complimented by the hair loss (alopecia) research programme led by Dr Matthew Harries. A new addition

to the Centre's Dermatopharmacology Unit, the programme is closely linked to both the laboratory and the specialist hair loss clinic at Salford Royal. International acclaim has already been received for landmark research in scarring hair loss, and current projects include collaborations with Sheffield University, and John Moores University, Liverpool.



We have several new exciting areas of research for 2014/15.

Keloid disease: a challenging enigmatic disorder

Every human will form a permanent scar following a deep enough dermal injury, and worryingly some of these scars in certain individuals become keloids which become progressively raised, symptomatic, disfiguring, and extremely difficult to treat. Virtually, all clinical treatment options are plagued by a high risk of recurrence post therapy. Keloids are unique to humans resulting in the absence of a useful animal model to study this condition. Hence, we developed the first ex vivo organ culture model for investigating keloids and have

already evaluated the potential delivery of target candidate therapeutic agents. Dr Ardeshir Bayat's laboratory focused approach in experimental and translational studies in the pathobiology of keloids, will enable better identification of biomarkers and mechanisms involved in its formation.

Mast Cell Biology

These unique cells form part of our immune system. This relatively new research programme is led by Professor Silvia Bulfone-Paus and is making major contributions to our understanding of mast cell activity. It also explores the key role that mast cells play in stress-triggered skin inflammation, skin ageing, photodermatology and hair growth control.

The NIHR Clinical Research Network

The NIHR Clinical Research Network: Greater Manchester makes an invaluable and active contribution to support the Dermatology Centre to increase the opportunities for patients to take part in clinical research. The Network is passionate about the positive contribution clinical research is making to patient care. As well as working collaboratively with other NHS providers, the Network contributes in part to the delivery of the Government's Strategy for UK Life Sciences by improving the environment for commercial contract clinical research in the NHS in the Greater Manchester area.

NHS
National Institute for
Health Research

Clinical Research Network
Greater Manchester

The Greater Manchester Dermatology Centre at Salford Royal NHS Foundation Trust

An international centre of clinical excellence, combining the highest standards in education and research to deliver quality NHS care to people with skin disease.



Salford Royal NHS Foundation Trust hosts one of the largest Dermatology services in Europe. It provides approximately 20,000 new outpatients and 67,000 follow-up appointments/outpatient procedures per annum. Many Salford Royal clinicians are recognised nationally and internationally for their clinical expertise.

The Dermatology Centre offers:

- Tertiary and secondary care services for both adults and paediatrics at Salford Royal NHS Foundation Trust
- Paediatric secondary care services at Pendleton Gateway in Salford (paediatric facility).
- Secondary care services at Fairfield Hospital, Bury and Stepping Hill Hospital, Stockport.
- Integrated Clinical Assessment and Treatment services at Radcliffe, Bury.

- GPSI (General Practitioner with a Special Interest) led Tier 2 medical and surgical dermatology services in Salford community and Stockport community
- Dedicated inpatient beds at Salford Royal for patients with a wide range of severe and chronic skin conditions, with access to topical treatments, phototherapy (UV light treatment) and on discharge a nurse-led daily dressings service.

The Centre has a wide portfolio of specialist services which serves the population of Greater Manchester, the North West and beyond. Our Tertiary services include specialist units for contact dermatitis investigation, micrographic surgery, a photosensitivity diagnostic service, photodynamic therapy programme and a range of laser treatments. Additionally the service provides a wide range of specialist clinics including severe psoriasis, lymphoma, porphyria, cutaneous disorders of the vulva, to name but a few.

The Centre is responsible for the North West England Training scheme for Dermatology and its SpR (Specialist Registrar) programme is one of the largest schemes in the UK.

One of the key priorities for Salford is the integration of clinical and academic practice. Our dedicated psoriasis clinic was established in 1994 under the Directorship of Professor Chris Griffiths and Dr Robert Chalmers and is supported by a breadth of clinical expertise, including specialist nurses and clinical psychologists. The psoriasis clinic is intimately associated with the comprehensive research programmes conducted within the Centre – as is the combined psoriasis and psoriatic arthritis clinic set up by Dr Richard Warren and Dr Hector Chinoy in 2010.

Salford Royal 
NHS Foundation Trust

A message from the Chief Executive

We are extremely proud of our Dermatology Centre, which has seen great expansion over recent years to meet increasing patient demand and firmly establish Salford Royal nationally as a specialist centre for dermatology. Our patients receive outstanding high quality care which can be attributed to the Centre's academic status. The Centre's academic clinical and basic science research and teaching drives innovation and improves outcomes as it directly informs patient care pathways ensuring patients receive the most appropriate treatment – personalised care.

The impact of directly translating the Centre's evidence-based research into the clinic, coupled with involving patients in choice and decision making about their dermatology care, has seen significant improvements in patient outcomes and to their quality of life.

The Dermatology Centre's wide portfolio of general and specialist services serve the populations of Greater Manchester, the North West and in some cases the UK. Both its academic research and clinical services are recognised not only nationally but internationally.

Investment from the Trust and a continued strategy of innovation will see the Centre embracing and developing new technologies and alternative models of service delivery ensuring The Dermatology Centre remains a recognised centre of excellence.

Sir David Dalton,
Chief Executive
Salford Royal NHS Foundation Trust

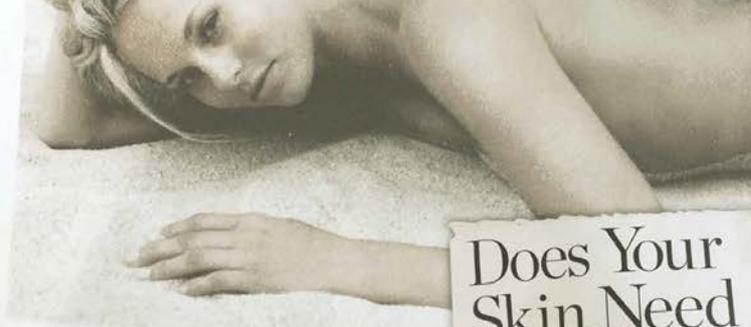


Sir David Dalton

Breakthrough treatment offers hope to sufferers of psoriasis

Psoriasis

UNLIKE ECZEMA, PSORIASIS IS not an allergic reaction but a disorder of the immune system, where skin cells replace themselves too rapidly, causing severe skin thickening, scaling and flaking. It's usually hereditary but the most common exacerbator of psoriasis is stress, says Dr Chris Griffiths, Professor of Dermatology at the University of Manchester and a leading expert on the condition. 'In people with a susceptibility to



Does Your Skin Need Therapy?

Put down the spot cream and tell me how you feel about your mother... OK, so it's not that simple...

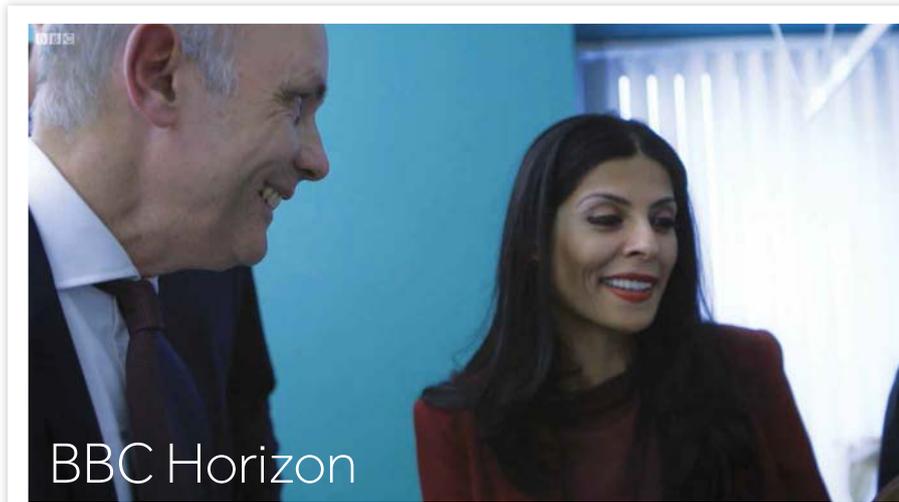
Adult acne

'IN THE LAST THREE YEARS THERE HAS been an increase in the number of people with adult acne...

In the News

Manchester Dermatology Research Centre enjoys a positive relationship with local and national media. We view media engagement essential to communicate our research to a wide audience. Press interest is generated from both our high-impact research outputs and public engagement activities.

It is important that the public have access to the best scientific evidence and expertise when dermatology stories hit the headlines. Many of our senior researchers are often invited to offer such 'expert' comment.



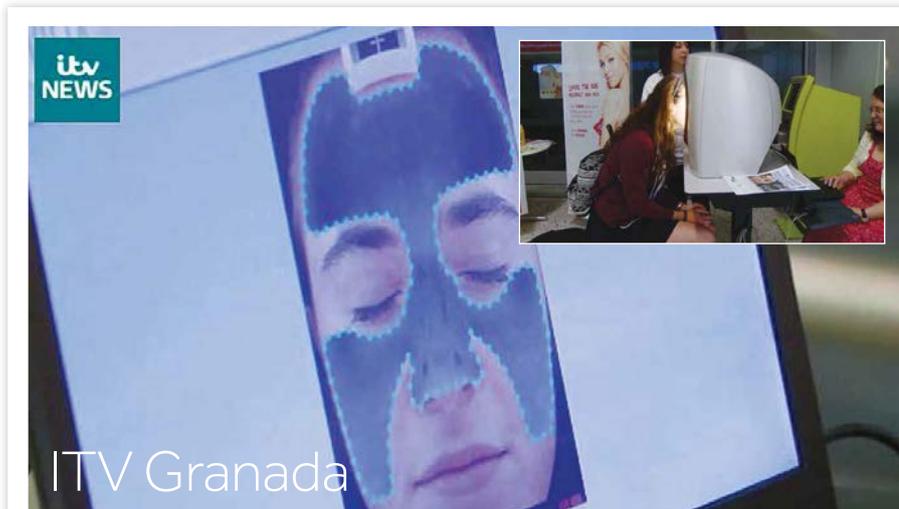
BBC Horizon

Professor Chris Griffiths and presenter Dr Rozina Ali in 'The Truth About Looking Young', BBC2 Horizon, 2012



BBC Radio 4

Professor Ralf Paus speaking on BBC Radio 4, August 2014, 'Hair, Fur and Cilia'. Describing each hair follicle as a hormone factory, Professor Paus explained how neurohormones play a vital role in helping hair grow.



ITV Granada

ITV Granada coverage of the Centre's joint 'Shunburn' initiative at Manchester Airport with the Teenage Cancer Trust, June 2014. Young holiday makers were invited to try our skin analysis machine to highlight the damage over-exposure to the sun can do to the skin. For more information: bit.ly/1s84V2M

Boots' No7

It is becoming increasingly recognised that scientific evidence is necessary to back up the claims of cosmetic houses.

Our involvement in the testing of Boots' No7 'Protect and Perfect Serum' has been widely covered in the media. When the product launched in 2007 the publication of our independent test results led to stocks being sold out worldwide! We demonstrated that the cream reversed some of the ageing effects of sun damage, such as fine wrinkles. Similar media interest has been shown in 2009 and 2014 for our follow up studies on subsequent incarnations of the Boots product.



Making a difference to society

Social Responsibility is a strategic goal for The University of Manchester and is fundamental to the work of the Centre for Dermatology Research. Our research aims to make a positive difference to society through tackling real challenges faced by those in our community.



Public Engagement and Patient and Public Involvement

We strive to make a difference to the well-being of our community not only through the delivery of world-class health research and teaching, but also through our public events and activities.

The Centre has a diverse programme of Public Engagement (PE) events and patient and Public Involvement (PPI) initiatives and members of our community are involved at all stages of research- from the identification of pertinent research questions to the development of innovative ways to communicate our findings. We have nurtured strong links with local and national patient groups and have found that involving a range of different people in our work provides opportunities for unique and valuable insights-leading to more effective, creative, meaningful and credible ways of working.

PE events involve all members of the Dermatology Centre – from clinicians and academics to research support staff. Activities are varied, and include participations in Science Festivals and Open Days along with dermatology led initiatives.

A variety of ‘sun awareness’ events are held each July and August to encourage members of the public to top up their sunscreen and protect their skin in the sun. Historically these events have benefited from material support from high street pharmacy Boots Trafford Centre store, the skin care brand La Roche-Posay, the British Association of Dermatologists (BAD) and the British Skin Foundation. Highlights have included a mole education event with Salford City Reds players and stalls at Old Trafford Cricket Ground. Clinicians from the Centre have even attended Wakestock music festival to support a free mole check service for revellers. In 2014 the group strengthened the Teenage Cancer Trust’s highly successful ‘Shunburn’ initiative (see page 19).



Dr Stephanie Ogden speaking at Manchester High School for Girls

We have strong relationships with local schools, and members of the team have presented to groups on a range of topics including skin health, dermatology research and career pathways in science.

MANCHESTER

PSORIASIS

SHOUT OUT



April 2014 saw the inaugural Manchester Psoriasis Shout Out.

This unique initiative was developed alongside patients to encourage people to 'Shout Out' about psoriasis and what it means to them. Coordinated by Dermatology Engagement Officer Susan Moschogianis, the week involved high-profile project launches, along with a skin healthcare roadshow and dedicated patient events. The Shout Out attracted several celebrity endorsements and produced two films including 'Psoriasis Flashdance' – a light-hearted film featuring dermatology centre staff and members of the public dancing to raise awareness of



the condition. Activities during the week were varied, and designed to address different aspects of living with the condition. The talents of Helen Hanrahan, fashion blogger and psoriasis patient, were utilised in a fashion show at Manchester's Trafford Centre which saw staff and patients join together to walk the catwalk – showing that everyone can look fabulous 'even on your flakiest days'! Other events gave patients the opportunity to ask clinicians questions about the condition, potential treatments, and to learn about new research.

However, the Shout Out not only benefited patients. Researchers and clinicians gained valuable insight into the needs of people living with psoriasis and the obstacles they face when trying to access services and treatments. What we learned from the Shout Out will not only be used to develop future engagement initiatives, but will inform core research activities.

“ The Centre’s fabulous ‘Psoriasis Shout Out’ week of events in Manchester was brilliantly planned and reached many people in really creative and innovative ways. ”

Char March, Poet.

For more information visit www.psoriasisshoutout.co.uk

“ The Shout Out has changed the way I see myself. I can look good. Psoriasis should not define who you are – it can only do that if you allow it to. ”

Hazel, psoriasis patient and Shout Out catwalk model.



“ There were so many wonderful things about the Shout Out, but the best for me was the strong feeling of camaraderie between patients, researchers and health professionals coming together to get people talking about psoriasis. It was one amazing week – bring on the next one! ”

Pauline Nelson, Researcher in health services for psoriasis.

IMPACT Research User Group

impact
PSORIASIS

Patient and Public Involvement (PPI) is a central part of all our research programmes. It has been a particular area of focus for the National Institute for Health Research funded IMPACT programme grant from the outset, and it is clear that both the research and researchers have benefited from close partnership with service users.

The IMPACT Research User Group (RUG) formed in October 2011 with the primary focus to advise the team on various aspects of the programme grant, and other associated research projects. The group is made up of individuals from Manchester and Salford with an active interest in psoriasis and its research – either living with psoriasis themselves or with someone who has psoriasis. With over 20 members, the RUG meets regularly with

the research team to discuss and advise on IMPACT and associated projects.

Three Patient Representatives are vital members of the IMPACT Steering Committee and take part in bi-annual meetings. These representatives provide their views and experience of living with psoriasis. They comment on patient self-care strategies and help identify barriers to practitioners providing patients with useful advice about lifestyle behaviour change. They also advise on how best to share IMPACT findings with wider audiences. Members of the RUG are encouraged to get involved with events held throughout the dermatology centre – for example the recent launch of the PSORT programme and the Manchester Psoriasis Shout Out.

“Through being a RUG member I have increased my knowledge about psoriasis and the fantastic research being done. It has also helped me to develop a more positive outlook – I know now that I am not alone living with psoriasis. It is good to know that my experience is valued, and with that comes a sense of empowerment. The researchers give weight to the ‘patient voice’ and I hope that my thoughts and contributions may, in some small way, make a difference.”

Mary, member of the IMPACT RUG



The Dermatology Centre supports the 'Sometimes It's Cancer' campaign.



The 'Sometimes It's Cancer' (SIC) campaign aims to raise awareness of symptoms of cancers that commonly affect young people aged between 16 and 24 years old.

SIC, which was developed at The University of Manchester and is part of the Teenage Cancer Trust's educational programme, is targeted at young people who are studying after school in higher education.

The main message of the SIC campaign is that cancer in young people is rare but that IT DOES HAPPEN. Dr Kate Vaughan is Manchester's Teenage Cancer Trust Programme Manager, which supports research, led by the Christie's Professor John Radford, into cancer in young people. "It is commonly acknowledged that cancer mainly affects older

groups" says Kate. "...But around 2,500 young people in the 16-24 age range are affected by cancer every year".

SIC aims to raise awareness amongst young people of the common signs to look out for:

- A lump, bump or swelling that is unexplained and persistent (doesn't go away, always comes back or gradually gets worse)
- Unexplained and persistent pain
- Fatigue
- Changes in weight
- Change in appearance of a mole

Following on from a recent, successful, collaboration between the groups as part of the Teenage Cancer Trust's annual 'Shunburn'

initiative, experts from Manchester's Dermatology Centre will be supporting Kate and the charity's education team to spread the word of SIC at future patient and public engagement events, and to raise awareness of the importance of protecting your skin in the sun.

For more information on the SIC campaign visit: www.cancer.manchester.ac.uk/SIC

You know your body. Don't ignore the symptoms. SEE YOUR GP.

Most of the time it's nothing BUT Sometimes It's Cancer...

f CancerSymptomsinYoungPeople
t @SIC_GB



“ *Dermatology is viewed as an exemplar by the Faculty of how to build a top quality translational research programme with a major global impact.* ”

Professor Ian Jacobs,
Vice-President,
The University of Manchester



“ *The Manchester Psoriasis Shout Out was a turning point for me. Thanks to this initiative and the wonderful staff at Manchester Dermatology Centre I am flake free for the first time in 10 years. It feels amazing!* ”

Rebecca, psoriasis patient and Shout Out 2015 ambassador



“ *The treatment has made a world of difference to my life. I am able to work again and not worry about paying my mortgage. I have a date for the first time in years – I don't feel ugly now.* ”

A 44 year old male patient following treatment for chronic dermatitis



The Manchester Centre for Dermatology Research wishes to thank research funders, national and international collaborators, healthcare professionals and professional societies for supporting its research to advance skin health.

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