

CURRICULUM VITAE

PROFESSOR RICHARD B WELLER

CURRENT POST Personal Chair, Medical Dermatology, University of Edinburgh, and Honorary Consultant Dermatologist, NHS Lothian.

Principal Investigator, Centre for Inflammation Research

I am a practising clinical dermatologist for half the week. In my university time my research is focussed on mechanisms of effect of ultraviolet radiation on systemic health, and on eczema in which I carry out both clinical and bench research

Further information at: [https://www.research.ed.ac.uk/portal/en/persons/richard-weller\(b59ff560-1756-497d-81d8-ab17082a4f5b\).html](https://www.research.ed.ac.uk/portal/en/persons/richard-weller(b59ff560-1756-497d-81d8-ab17082a4f5b).html)

UNIVERSITY AND PROFESSIONAL EDUCATION

2006	FRCP (Edin)
2000	MD (University of London)
1998	GMC Specialist Register (Dermatology)
1990	MRCP
1987	MB, BS, St Thomas' Hospital, London

CAREER SINCE GRADUATION AND CURRENT APPOINTMENTS

Current appointment

2002- Honorary Consultant and Substantive Senior Lecturer (2002), Reader (2016), Professor (2022), NHS Lothian and University of Edinburgh

Research training.

2000-2002	Research Fellow, University of Pittsburgh Medical Centre,
1999-2000	Research Fellow, University of Edinburgh. Dept of Dermatology;
1998-1999	Research Fellow, Heinrich-Heine-Universität, Düsseldorf, Immunobiology.

Dermatology training.

1996-1998	Lecturer in Dermatology & Hon'y Senior Registrar, University of Edinburgh;
1994-1996	Registrar in Dermatology, Aberdeen Royal Infirmary;
1993-1994	SHO, St John's Institute of Dermatology, London.

General Medicine training

1991-1992	Registrar in General Medicine, Cairns Base Hospital, Australia;
1988-1991	Medical SHO rotation, South Tees Hospitals (now James Cook University);
1988	SHO in General Medicine, Bishop Auckland General Hospital.
1987-1988	Pre-registration House Physician, West Cumberland Hospital.
1987	Pre-registration House Surgeon, Burton on Trent General Hospital.

MEMBERSHIP OF AND CONTRIBUTION TO LEARNED SOCIETIES AND JOURNALS

NHS Research Scotland- Dermatology lead 2017-2025
Scottish Dermatology Society- President 2023-2025
British Association of Dermatologists- Executive Committee 2023-2025
NICE and SMC dermatology advisor on several technology appraisal boards for eczema therapeutics.
British Society for Investigative Dermatology (former treasurer)
Society for Investigative Dermatology (USA. Formerly European representative and then Chairman of the committee running the fellows programme at the annual meeting)
European Society for Dermatological Research
Editorial Board Member- British Journal of Dermatology; Skin Health and Disease

TEACHING AND SUPERVISION

2006-ongoing Programme Director, M Med Sci programme

This is a one year research Masters Programme for medical graduates. I developed the programme and am responsible for its overall running, as well as student selection, the core teaching elements, and arranging speciality specific supervisors and research projects. Students on the course often undertake clinical research projects, and I teach on this area.

Postgraduate student supervision and examination.

I have supervised 8 PhD and 1 MD student and 12 Research Masters students.

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I have been external examiner for 15 PhD or MD students and am external examiner for 2 Masters programmes. Nominated as 'University teacher of the year' by the Edinburgh student society in 2012.

Esteem indicators:

1. I have been invited/plenary/key note speaker at >40 International meetings
2. Invited member of various policy advisory boards, including the National Cancer Institute panel on sun exposure guidelines for the National Academy of Sciences, USA and an invited reviewer for UN Environment Effects Panel in 2022.
3. Significant public engagement work including a TED talk viewed >1.3 million times (http://new.ted.com/talks/richard_weller_could_the_sun_be_good_for_your_heart), public lectures in locations from the Barcelona CosmoCaixa Science Museum to Cabaret of Dangerous Ideas at the Edinburgh Fringe.
4. Grant reviewer for MRC, UNESCO and Deutsche Forschung Gemeinschaft. Paper reviewer for Nature Medicine, Journal of Investigative Dermatology, BMJ and most leading dermatology journals.

Clinical and Research Activity

My clinical and research activities are closely intertwined. I have described a novel pathway by which UV mobilises NO from stores in the skin to the systemic circulation with widespread cardiovascular and metabolic effects. I continue this research looking at the mechanism and wavelength dependence of this pathway in skin and its effects on areas of systemic health other than cardiovascular disease.

I run a specialist eczema clinic in my NHS time and am actively engaged in eczema research as an investigator and steering committee member of the A*STAR registry study in the UK, and have been principal investigator on a number of commercial clinical trials, including DUPISTAD (Phase 3), EUROSTAD (data research), KPL-716 (Phase 2) and SUNLIGHT (Phase 2). I am also co-supervising 2 PhD students studying different aspects of the immunology of eczema. Under my leadership we have appointed the first Dermatology NRS Clinical Research Fellow (Dr Claire Leitch) and jointly we are just appointing our first dedicated dermatology research nurse with commercial trial derived funding.

SELECTED PUBLICATIONS

- 1) Kim PKM, Wang Y, Gambotto A, Kim, Y-M, Weller R, Zuckerbraun BS, Hua Y, Watkins SC, Billiar TR (2002) Hepatocyte FADD/MORT1 levels increase in response to pro-apoptotic stimuli. *J Biol Chem*, 277:38855-38862.
- 2) Weller R, Schwentker A, Billiar TR, Vodovotz Y (2003) Autologous nitric oxide protects mouse and human keratinocytes from ultraviolet B radiation-induced apoptosis. *Am J Physiol Cell Physiol*, 284:C1140-1148.
- 3) Mowbray M, Tan X, Imko B, Wheatley P.S., Morris R.E. and Weller R (2008) Nitric oxide induces T lymphocyte infiltration in human skin, but minimal inflammation. *J Invest Dermatol* 128:352-360.
- 4) Mowbray M, McIntock S, Weerakoon R, Lomatschinsky N, Rossi A, Weller R (2009) Enzyme independent NO stores in human skin: quantification & influence of ultraviolet radiation. *J Invest Dermatol*, 129:834-842.
- 5) Feelisch M, Kolb-Bachofen V, Liu D, Lundberg J, Revelo L, Suschek C, Weller RB (2010) Is sunlight good for the heart? *Eur Heart J*, 31:1041-1045.
- 6) Taylor S, Woodcock J, Kavanagh G, Weller RB (2011) Hyperhidrotic and control subjects have similar sweating responses to pilocarpine administration. *J Am Acad Dermatol*, 64:603-604.
- 7) Tan SP, Abdul-Ghaffar S, Weller RB, Brown SB. Protease-antiprotease imbalance may be linked to potential defects in profilaggrin proteolysis in atopic dermatitis. *British J Dermatol* (2012), 166 1137-1140
- 8) Liu D, Fernandez B, Hamilton A, Lang N, Gallagher J, Newby DE, Feelisch M, Weller RB. UVA Irradiation of Human Skin Vasodilates Arterial Vasculature and Lowers Blood Pressure Independently of Nitric Oxide Synthase. *J Invest Dermatol* (2014) 10.1038/jid.2014.27
- 9) Feelisch M, Gorman S, Weller RB. Vitamin D and cardiovascular risk: are we barking up the wrong tree? *Lancet Diabetes and Endocrinology*. (2014); 2(4):e8.
- 10) Geldenhuys S, Hart PH, Endersby R, Jacoby P, Feelisch M, Weller RB, Matthews V and Gorman S. Ultraviolet radiation suppresses obesity and symptoms of metabolic syndrome independently of vitamin D in mice fed a high fat diet. *Diabetes*. (2014) ; 63(11):3759-3769.
- 11) Johnson RS, Titze J, and Weller R. Cutaneous control of blood pressure. *Curr Opin Nephrol Hypertens* 25: 11-15, 2016.

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- 12) Leitch C,.....Weller R. Filaggrin null mutations are associated with increased maturation markers on Langerhans cells. *J Allergy Clin Immunol* (2016). doi:10.1016/j.jaci.2015.11.040.
- 13) Duffin R, O'Connor R A, Crittenden S, Weller RB... Howie SE, Rossi AG, Yao C. (2016).;Prostaglandin E2 Constrains Systemic Inflammation by Promoting Reparative Innate Lymphoid Cells. *Science*. 351(6279):1333-8.
- 14) Wang B, McHugh BJ, Qureshi A, Campopiano DJ, Clarke DJ, Fitzgerald JR, Dorin JR, Weller R, and Davidson DJ. IL-1beta-mediated protection of keratinocytes against Staphylococcus aureus-secreted proteases is mediated by human beta defensin 2. *J Inv Dermatol* (2017). <http://dx.doi.org/10.1016/j.jid.2016.08.025>
- 15) Robb C, McSorley H, Yu C, Crittenden S, Astier A, Breyer RM, Anderton SM, Ghazal P, Narumiya S, Rossi AG, Howie SE, Guttman-Yassky E, Weller RB, Yao C. Prostaglandin E2 stimulates adaptive IL-22 production and promotes allergic contact dermatitis. *J. Allergy Clin Immunol*. (2017). doi.org/10.1016/j.jaci.2017.04.045.
- 16) Yu C, Fitzpatrick A, Cong D, Yao C, Yoo J, Turnbull A, Schwarze J, Norval M, Howie SEM, Weller RB, Astier AL. Nitric oxide induces human CLA+CD25+Foxp3+ regulatory T cells with skin homing potential. *J. Allergy Clin Immunol*. (2017). doi.org/10.1016/j.jaci.2017.05.023 (Joint senior author)
- 17) Fleury, N., M. Feelisch, P. H. Hart, R. B. Weller, J. Smooty, V. B. Matthews, and S. Gorman. Sub-Erythral Ultraviolet Radiation Reduces Metabolic Dysfunction in Already Overweight Mice. *J Endocrinol* (2017): doi.org/10.1530/JOE-16-0616.
- 18) Geller, A. C., N. G. Jablonski, S. L. Pagoto, J. L. Hay, J. Hillhouse, D. B. Buller, W. L. Kenney, J. K. Robinson, R. B. Weller, M. A. Moreno, B. A. Gilchrest, C. Sinclair, J. Arndt, J. M. Taber, K. L. Morris, L. A. Dwyer, F. M. Perna, W. M. P. Klein, and J. Suls. Interdisciplinary Perspectives on Sun Safety. *JAMA Dermatol* (2017). doi.org/10.1001/jamadermatol.2017.4201.
- 19) Weller RB, Wang Y, He J, et al. Does Incident Solar Ultraviolet Radiation Lower Blood Pressure? *Journal of the American Heart Association*. 2020;9(5):e013837.
- 20) Jin Y, Wang F, Carpenter M, Weller R, Tabor D, Payne S. The effect of indoor thermal and humidity condition on the oldest-old people's comfort and skin condition in winter. *Building and Environment*. 2020;106790.
- 21) Cherrie M, Clemens T, Colandrea C, Feng Z, Webb DJ, Weller RB et al. Ultraviolet A radiation and COVID-19 deaths in the USA with replication studies in England and Italy. *Br J Dermatol* 2021; 185(2): 363-370.
- 22) Megaw L, Clemens T, Daras K, Weller RB, Dibben C, Stock SJ. Higher Sun Exposure in the First Trimester Is Associated With Reduced Preterm Birth; A Scottish Population Cohort Study Using Linked Maternity and Meteorological Records. *Frontiers in Reproductive Health* 2021; 3(35).
- 23) Weller RB, Macintyre IM, Melville V, et al. The effect of daily UVA phototherapy for 2 weeks on clinic and 24-h blood pressure in individuals with mild hypertension. *Journal of Human Hypertension* 2023;37(7):548-53.
- 24) Yizengaw E, Nibret E, Yismaw G, Gashaw B, Tamiru D, Munshea A, Takele Y, Müller I, Chapman L, Weller R, Cotton JA. Cutaneous leishmaniasis in a newly established treatment centre in the Lay Gayint district, Northwest Ethiopia. *Skin Health and Disease*. 2023;3(4):e229.
- 25) J. R. Shelley, B. J. McHugh, J. Wills, J. R. Dorin, R. Weller, D. J. Clarke, et al. A mechanistic evaluation of human beta defensin 2 mediated protection of human skin barrier in vitro. *Scientific Reports* 2023; 13 (1) 2271 DOI: 10.1038/s41598-023-29558-0
- 26) Merola JF, Chiou AS, During E, Costanzo A, Foley P, Alfalasi A, et al. Dupilumab significantly improves sleep in adults with atopic dermatitis: results from the 12-week placebo-controlled period of the 24-week phase 4 randomized double-blinded placebo-controlled DUPISTAD study. *Br J Dermatol* 2023.
- 27) Stevenson AC, Clemens T, Pairo-Castineira E, Webb DJ, Weller RB, Dibben C. Higher ultraviolet light exposure is associated with lower mortality: an analysis of data from the UK Biobank cohort study. medRxiv 2023:2023.07. 11.23292360.

Books: Weller R, Hunter H, Mann M. *Clinical Dermatology* 5th ed. Wiley 2015.

R. Richard Weller 4th March 2024