AWTRS 2026 Conference Program

Day 1 – Wednesday 26 August

08:00 – 10:00 Registration

10:00 – 10:15 Welcome and Conference Opening

Prof Allison Cowin, President AWTRS and Conference Chair

10:15 – 10:45 Plenary 1

Prof Sabine Werner
A01 Control of skin inflammation by fibroblast growth factor signalling in epithelial cells: Mechanisms and consequences for wound healing
Chairs: Allison Cowin, Xanthe Venn

10:50 – 12:00 Session 1: Cellular Mechanisms of Tissue Repair

Chairs: Allison Cowin, Xanthe Venn

10:50 – 11:10 **Invited speaker: Prof Quenten Schwartz** A02 Endothelial IGF-1 as a regulator of epidermal architecture across development and regeneration
11:10 – 11:25 Seen Ling Sim A03 Single Cell and Spatial Transcriptomics Reveal Endothelial SOX9 Dependent EndMT and Immune Remodelling in Fibrotic Skin
11:25 – 11:40 Chris Turner A04 Pro-inflammatory granzyme K contributes to delayed wound healing, increased fibrosis, and microvascular haemorrhage in injured skin
11:40 – 11:55 Tony Parker A05 Wound Fluid Proteomics Reveal Elevated alpha-1 Antitrypsin Levels are Associated with Healing of Medical Device Related Pressure Injury.
11:55-12:00 Discussion/ Q&A

12:00 – 13:00 Lunch, Posters and Exhibition

13:00 – 13:30 Plenary 2

Prof Jess Frith
A06 Shaping the Mesenchymal Stromal Cell Microenvironment: Bioengineering Strategies for Improved Regenerative Outcomes
Chairs: Rachael Moses, Abbas Shafiee

Day 1 – Wednesday 26 August (Continued)

13:30 – 15:00 Session 2: Stem Cells and Tissue Regeneration

Chairs: Rachael Moses, Abbas Shafiee

13:30 – 13:45 Abbas Shafiee A07 Engineering Human Skin Organoids for Physiologically Relevant Disease Modelling
13:45 – 14:00 Stuart Mills A08 Development of a therapeutic WoundGel for the treatment of wounds on EB patients
14:00 – 14:15 Linley Worth A09 Differentiation of IPS cells into fibroblasts to validate gene targets for Dupuytren's Contracture
14:15 – 14:30 Heather Russell A10 Exploring the plasticity of Spiny Mouse dermal Fibroblasts, as a blueprint for human skin regeneration
14:30-14:45 Tuyet Pham A11 A Wound Healing Material Based on Plasma-Assisted *Spirulina maxima* Extract
14:45 - 15:00 Discussion/ Q&A

15:00 – 15:30 Afternoon Tea

15:30 – 16:00 Plenary 3

INVENTIA LIFE SCIENCE

A/Prof Joanneke Maitz
A12 The future of bio-printing skin: pre-clinical and clinical outcomes of 3D printing skin in-situ
Sponsored by Inventia Life Sciences
Chairs: Brooke Farrugia, Shadab Bagheri

16:00 – 17:30 Session 3: Emerging Technologies, Biomaterials and Bioengineering

Chairs: Brooke Farrugia, Shadab Bagheri

16:00 – 16:20 **Invited speaker: Prof Yiwei Wang** A13 Biomimetic Drug Delivery Systems for Diabetic Wound healing
16:20 – 16:40 **Invited speaker: Prof Khoon Lim** A14 Synthetic Degradable Hydrogels for Controlled Delivery of Therapeutics
16:40 – 16:55 Md Shariful Islam A15 Temporally Controlled Secretome Delivery from Photo-Curable Pluronic Hydrogels for Wound Healing Applications
16:55 – 17:10 Andrew Hayles A16 Microalgae extract-loaded hydrogels as a sustainable wound healing application
17:10-17:15 Discussion/ Q&A

17:15 – 19:00 Welcome Reception – Bradley Forum

19:00 – Late EMCR Event – West Oak Hotel, Hindley Street, Adelaide

Day 2 – Thursday 27 August

08:30 – 08:40 Welcome and Housekeeping

08:40 – 09:10 Plenary 4

Prof Susan Volk
A18 From Mechanism to Medicine: Type III Collagen as a Regulator of Regenerative Healing and Therapeutic Biomaterial for Chronic Wounds
Chairs: Zlatko Kopecki, Andrew Stevenson

09:10 – 10:15 Session 4: Burns, Fibrosis and Scarring

Sponsored by Polynovo
Polynovo Patient story video https://vimeo.com/1058427026
Chairs: Zlatko Kopecki, Andrew Stevenson

09:10 – 09:30 **Invited speaker: Prof Fiona Wood** A19 The next generation of ReCell autologous skin cell suspension
09:30 – 09:45 Nishka Bhalla A20 Temporal dynamics of extracellular matrix protein synthesis in burn and excisional wound healing
09:45 – 10:00 Lucy Barrett A21 Understanding the impact of burn injury on the phenotype and function of skin-infiltrating immune cells
10:00 – 10:15 Ruth Simpson A22 Optimising plasma-activated dressings to stimulate burn wound healing

10:15 – 10:45 Coffee, Posters and Exhibition

10:45 – 11:15 Plenary 5

A/Prof Katharina Richter
A23 From biofilm-infected mouse burns to diabetic foot ulcers: Translating plasma-activated water for chronic wound cleansing
Chairs: *Tony Parker, Snehlata Kumari*

11:15 – 12:35 Session 5: Infection and Wound Healing

Chairs: Tony Parker, Snehlata Kumari

11:15 – 11:35 **Invited speaker: Dr Zlatko Kopecki** A24 Safety and efficacy validation of a stimuli responsive silver nanoparticle hydrogel for elimination of bacterial infection in porcine wounds
11:35 – 11:50 Alex Logothetis A25 Investigating the Addition of Biofilms to Animal-Origin-Free 3D In Vitro Chronic Wound Models
11:50 – 12:05 Alexandra Boyling A26 Characterising the cytocompatibility of novel, antimicrobial selenium nanoparticle formulations
12:05 – 12:20 Anteneh Geremew A27 Microbiome Profiling and Antimicrobial Efficacy of a Novel Silver-Nanoparticle Hydrogel Dressing Against Clinical Isolates from Paediatric Burn Wounds
12:20 – 12:35 Bhuvaneswari Kanuri A28 Targeting Infection and Delayed Healing in Orthopaedic Implants Using Nano-Engineered Titanium Surfaces

12:35 – 13:30 Lunch, Posters and Exhibition

Day 2 – Thursday 27 August (Continued)

13:30 – 14:00 Plenary 6

Dr Neil McMillan / Prof Robert Fitridge
A29 Wound healing in diabetes-related foot disease: Getting the basics right and incorporating new technologies now and in the future
Chairs: Susan Volk, Neil McMillan

14:00 – 15:30 Session 6: New Approaches for Monitoring and Treating DRFUs and Chronic Wounds

Chairs: Susan Volk, Neil McMillan

14:00 – 14:20 **Invited speaker:** A30 **Dr Xanthe Venn** Extracellular Actin Scavenging System Dysregulation as a Driver of Diabetes-Related Foot Ulcer Risk
14:20 – 14:40 **Invited speaker:** A31 **Dr Emma Solly** microRNA-181c-5p as a therapeutic target for diabetes-impaired wound healing
14:40 – 14:55 A32 Zahra Lotfollahi The functionality of high-density lipoproteins is impaired in people with diabetes that require minor amputations
14:55 – 15:10 A33 Sparsh Tiwari An in vitro examination into the effects of SERPINI2 and SERPINB2 on diabetes-related wound healing

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15:15 – 15:45 AWTRS AGM

15:30 – 16:00 Coffee and Exhibition

16:00 – 17:15 Poster Session and Judging
(Presenters to stand with posters)

18:30 – 22:00 Conference Dinner – Adelaide Zoo

Day 3 – Friday 28 August

08:30 – 08:40 Welcome and Housekeeping

08:40 – 09:10 Plenary 7

Prof Artur Schmidchen
A35 Harnessing Nature's Own Innate Defense Peptides for Novel Wound Therapeutics: From Discovery to Clinical Development of TCP-25
Chairs: Sabine Werner, Stuart Mills

09:10 – 10:15 Session 7: Innate Immunity and Inflammation

Chairs: Sabine Werner, Stuart Mills

09:10 – 09:30 **Invited speaker: Dr Snehlata Kumari** A36 Cytokine network and cellular communications in skin homeostasis and inflammation
09:30 – 09:45 Lucy Barrett A37 Understanding the impact of childhood burn injury on adaptive immunity and disease risk later in life
09:45 – 10:00 Rae Moses A38 Evaluation of Pterocarpus indicus sap on immunomodulation and chronic wound model repair
10:00 – 10:15 Linley Worth A39 Understanding the delivery of an ASO therapy for Epidermolysis Bullosa

10:15 – 10:45 Coffee, Posters and Exhibition

10:45 – 12:30 Session 8: From bench to bedside: advances in clinical and regenerative therapies

Chairs: Joanneke Maitz, Katharina Richter

10:45 – 11:05 **Invited speaker: Prof Simon Cool** A40 Accelerating impact in regenerative therapies translation pathways designed to deliver curative treatments into clinical practice.
11:05 – 11:20 Rozan Alkresheh A41 Exploring the mechanisms of keloid recurrence
11:20 – 11:35 Heather Russell A42 Fibroblast Plasticity in Human Dermis: Implications for Fibrotic Commitment in Wound Healing
11:35 – 11:50 Lucas Guimaraes Carelli A43 Functional Clinical Outcomes following Composite Dermal Graft

11.50 – 12:20 Panel Discussion
Innovation in wound healing and regenerative therapies – where to next?
Facilitator: **Simon Cool**
Panel: **Sabine Werner, Susan Volk, Tony Parker & Joanneke Maitz**

12:20 – 13:00 Awards and Closing Remarks

Poster Presentations

P01 *Amy Kita:* In vitro and in vivo assessment of recombinant honeybee silk material and its effects on wound healing.

P02 *Quan Trong Luu:* Reactive Oxygen Species-Responsive Plasma-Polymerized Coating Derived from Diallyl Sulfide for Controlled Antibiotic Release and Antimicrobial Applications on Biomedical Devices

P03 *Andrej Stefanovic:* Assessing extracellular vesicles for therapeutic development using 3D models of skin

P04 *Xanthe Venn:* Magnesium oxide based porous, microparticles for management of wound infections.

P05 *Anna Antipov:* Targeting Biofilm Infection in Deep Burn Injuries Using an Advanced Antimicrobial Peptide-Loaded Dermal Matrix

P06 *Bin Guan:* Organic Semiconductors as Tuneable Electronically Active Biomaterials for Cell and Tissue Interfaces

P07 *Yohannes Wondmkun:* Understanding Exosome Secretion, Cargo Composition, and Wound-Healing Efficacy Using an Additive-Manufactured Microfluidic Device

P08 *Matthew Mack:* Modelling Extracellular Actin-Flightless Dynamics

P09 *Madhumita Thiagarajan:* Interrogation of Parameters Modulating Blood Clot Formation to Develop Next Generation of Bleeding Control Products

P10 *Aidan Patterson:* From Inhibition Zones to Clearance Patterns: Spatial Models of Antimicrobial Action

P11 *Julia Lockerd:* Evaluation of the effects of animal-origin-free media on skin cell responses

P12 *Alex Tam:* Mathematical modelling in wound healing

P13 *Jordan Hall :* Assessing the Efficacy of Prophylactic Bacteriophage Therapy in an In-vitro Human Nasal Epithelial Cell Wound Healing Model

P14 *Eleonora Allievi:* DEFINING THE ROLE OF GRANZYME K IN SKIN INFLAMMATION AND CHRONIC ITCH

P15 *Tony Parker:* Interim Analysis from a Case Series and RCT Investigating the Effectiveness and Safety of Amnion Allograft Intervention Versus Debridement Following Failed FTSG