Welcome

As many of you would be aware we have just held our 4th AWTRS conference on the Gold Coast. I would like to say thank you to all the participants for making it such an excellent meeting, for the excellent presentations and for the friendly atmosphere of the meeting. It’s the registrants that really make the meeting and as group you were very supportive of each other, which was great. There were some outstanding talks, showcasing some of the excellent work being undertaken in the field. I would also like to thank our major sponsors including Smith & Nephew, Pheonix Eagle, Institute for Health and Biomedical Innovation and the Company of Biologists. Without their sponsorship meets such as this last one would not be possible so we are very grateful to them.

We also held our annual general meeting at the conference, where the current AWTRS committee stepped down and a new (well revised) AWTRS committee was elected. I would like to take this opportunity to say a big thank you to the three committee members who step down at the AWTRS AGM, namely Joe Rothnagel, Ian Darby and Carolina Weller. Joe and Ian are both inaugural members of AWTRS committee and have over the past 7 years put a lot of work to help make the society and its 4 conferences a big success. Further more, Ian as newsletter editor helped establish the AWTRS newsletter and had the unenviable job of putting the newsletter together. So thank you Ian. The reigns have now been handed over to Dr Brooke Farrugia (and hopefully a few other members). We welcome on board Dr Zlatko Kopecki (UniSA) as the new AWTRS ECR representative, Prof Prinder Kaur (PeterMac), who was also a founding committee member, has re-joined the committee and we now have a representative from New Zealand, Dr Lyn Wise (Uni of Otago), who many of you may have seen talk at AWTRS 2014. Details on the new committee can be found within the newsletter.

At the conference we also announced the recipients of the AWTRS National/ International Travel awards. Dr Tara Fernandez, University of South Australia received a $1000 international travel award of $1000 to attend the European Tissue Repair Society Annual Meeting in Edinburgh and Dr Zlatko Kopecki, University of South Australia received $1000 international travel award to attend the Wound Healing Society Meeting in Orlando. Heng Teck Chong, a PhD student at University of South Australia and Dr Stuart Mills, also from the University of South Australia both received travel awards of $500 to attend the 2014 Cutaneous Biology Meeting to be held at the University of Queensland’s Moreton Bay Research Facility on North Stradbroke Island from 22-26 September 2014.

Talking about the 2014 Cutaneous Biology Meeting, the AWTRS is sponsoring a session at this meeting and it would be great to see some of our members on Stradbroke Island in September. Details of the meeting can be found on the flyer in this issue and on the ASDR web site. Of note the abstract deadline is looming for those wishing to present at the meeting. We hope to see you there.

Finally, if there are any budding science writers out there who would like to contribute news, reports or articles to the newsletter we are always happy to receive them. Just send to: Brooke Farrugia at b.farrugia@unsw.edu.au

Kind regards,
Dr Rachael Murray (AWTRS President)
A new AWTRS Committee was elected at the AGM in May. Welcome to our new committee. Details can be found below and contact details can be found on the back page.

**AWTRS OFFICE BEARERS**

**President:**  
Dr Rachael Murray  
Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane.

**Vice-President:**  
Assoc/Prof Chris Jackson  
The Sutton Arthritis Research Laboratories, Kolling Research Building, Royal North Shore Hospital, Sydney.

**Secretary/Membership:**  
Dr Leila Cuttle  
Institute of Health and Biomedical Innovation and Queensland Children's Medical Research Institute, Royal Children's Hospital, Brisbane.

**Treasurer:**  
Assoc/Prof Geoff Sussman  
Monash University, Melbourne.

**Early Career Representative:**  
Dr Zlatko Kopecki  
Centre for Regenerative Medicine, Mawson Institute, University of South Australia, Adelaide.

**GENERAL COMMITTEE MEMBERS**

**Prof. Allison Cowin,**  
Centre for Regenerative Medicine, Mawson Institute, University of South Australia, Adelaide.

**Assoc/Prof Pritinder Kaur**  
Peter Mac, Melbourne.

**Dr Lyn Wise**  
Department of Microbiology and Immunology, University of Otago, Dunedin, New Zealand.

**Assoc/Prof Susan McLennan**  
Discipline of Medicine, University of Sydney, Sydney.

**Dr Rodney Dilley**  
Ear Science Centre, School of Surgery, University of Western Australia, Perth.

**Dr Kerry Manton**  
Institute of Health and Biomedical Innovation, Queensland University of Technology, Brisbane.

**Dr Anthony Dyer**  
Wound Management Innovation CRC, Adelaide.
Day One

The 4th annual AWTRS conference was opened with a welcome from society president Dr Rachael Murray on Sunday afternoon the 4th of May at the Gold Coast Convention and Exhibition Centre in sunny Queensland. We launched straight into the first of the three days, sponsored by QUT and the Institute of Health and Biomedical Innovation with a MasterClass session chaired by Dr Leila Cuttle which gave us a glimpse of the future of wound and tissue repair research. Presentations by 6 doctoral candidates/early career researchers demonstrated the breadth of research undertaken within the field, from lab bench to bedside. Research which ranges from understanding microRNA involvement in keratinocyte migration and intracellular trafficking within macrophages, through the characterisation of the wound healing phenotype of various mouse strains and cytokine profiling of chronic leg ulcers, all the way up to development of wound healing therapeutics from native plants and clinical trials of low dose aspirin as an adjunctive therapy in treating chronic ulcers. We certainly look forward to hearing more about the progress of this research at the next meeting!

The second Masterclass session was a panel discussion with Prof Carien Niessen, Prof David Becker, Prof Rick Sturm and Dr Leila Cuttle, chaired by Associate Prof Sue McLennan who neatly summarised the careers of the speakers into key points which were helpful tips for students and early career researchers just beginning the journey. We were told to look for work in labs which fitted our personalities and that it helps to have colleagues who ‘laugh as loud as you do’. We learnt that a successful career may come from finding the right fit and staying there for a long time, or it may require making a big change and going where opportunities arise. We heard about the importance of international collaboration and taking time to learn from those who are experts in the field to improve your own research and finally that if you can’t research in an area which traditionally draws a lot of funding, make sure you are passionate about what you do and see the positive impact that you can make upon the lives of many via the improvement of wound care. The panel highlighted the importance of finding mentors to help you along the way and that fundamental to developing these relationships was networking at meetings such as this one.

Day one was concluded with a poster session and welcome reception, accompanied by hors d’oeuvres and wine, where a larger number of posters were presented by the society’s young researchers, presenting data showcasing their doctoral research. Following their poster presentations the students and ECRs had a great opportunity to practice their networking skills at the ECR social event held on this first night of the conference within Jupiters Casino where a free drink helped to open the lines of communication.

Day Two

Day two began with the first plenary lecture by Prof David Becker and chaired by Dr Rachael Murray. Prof Becker described the development of a promising new treatment to promote the healing of chronic wounds by targeting the gap junction protein, Connexin 43 through the application of Cx43 specific antisense gel to diabetic and venous ulcers. The day’s first session ‘Mechanism of repair and fibrosis’ was chaired by Leila Cuttle and begun with Rob Parton from the Institute of Molecular Bioscience giving insights into the ‘little caves’ or small invaginations of the plasma membrane that are called caveolae and seen in many cell
types. These lipid structures are formed and maintained by caveolin proteins and enriched with signalling molecules. Genetic ablation of caveolin proteins is associated with a number of muscle diseases. Parton showed in his presentation that cellular mechanoprotection is achieved by the disassembly of caveolar rosettes. Polarised distribution caveolin proteins and caveolae also suggest that they play a role in directed cell migration. Allison Cowin from the Mawson Institute and former president of the AWTRS presented data showing that Flightless I (Flii) is a potential target for the development of anti-scarring treatments due to the impact of this protein as negative regulator of hypotrophic scarring. Anti-Flii antibodies have shown to reduce scarring.

A mathematical model developed from cell culture experiments was presented by Matt Simpson from QUT and proved to accurately predict the position of the leading edge of a moving cell front – a feature essential of wound repair and cancer metastasis – and cell density profiles based on random motility and proliferation. Jemma Evans from Prince Henry's Institute educated us about the rapid scar-free post-menstrual repair of the endometrium. Factors involved in this process seem to act in a paracrine manner to facilitate repair and have also shown to promote re-epithelisation in wound healing models of in vivo and ex vivo assays. Using a proteomic approach combined with functional assays Evan’s group was able to identify specific factors of menstrual fluid involved in the rapid re-epithelisation. Using a whole muscle autograft model of muscle regeneration Dr Eleanor Mackie’s group at the University of Melbourne showed that skeletal muscle regeneration requires signalling via protease-activated receptor-1 (PAR-1) and that PAR-1 null muscles exhibit decreased numbers of neutrophils and macrophages and increased fibrosis of the tissue.

The second plenary speaker, Prof Graham Lieschke from Monash University, talked about his studies of leukocyte behaviour in response to sterile wounding using an in vivo zebrafish model. Performing live imaging, he showed that neutrophils arrive at the wound first and can cell-autonomously down-regulate the post-wounding hydrogen peroxide gradient. This migratory behaviour could be altered by modifying the hydrogen peroxide gradient, which could explain defective leukocyte migration in situations of perturbed hydrogen peroxide dynamics after wounding. Prof Lieschke also showed that macrophage migration towards the wound site is slower than neutrophil migration but that macrophages remain at the wound margin for longer than neutrophils.

Dr Rachael Murray, current president of the AWTRS, chaired the next session on ‘Inflammation, wound healing and regeneration’. The session started with the presentation of Prof Chris Jackson from the Kolling Institute who showed us that activated protein C (APC) utilises Tie2 enhance endothelial barrier function and maintain blood vessel integrity in mice. As APC reduces the vascular permeability also fewer cells can infiltrate the surrounding tissue. The next speaker, Dr Megan Lord from the University of NSW, presented her work on perlecan, which is a large multi-domain heparan sulphate proteoglycan of the extracellular matrix that binds with high affinity to platelet factor 4 (PF4). PF4 itself gets released from the α-granules of activated platelets and acts as chemotactic for neutrophils, fibroblasts and monocytes and thus, plays a role in inflammation. Perlecan inhibits platelet activation by binding and controlling the activity of PF4 and through this binding exhibits an anti-inflammatory role by mopping up PF4 to prevent downstream signalling events that promote the on-going inflammatory response.

Coming all the way from the University of Otago in New Zealand Dr Lyn Wise suggested an inhibitory role for Langerhans cells (LCs, epidermal dendritic cells) during cutaneous wound healing. She showed that depletion of said LCs improved wound closure and decreased the numbers of DCs while increasing the numbers of macrophages and cytotoxic T cells. This could mean that LCs may suppress the proliferative phase of cutaneous wound healing by modulating trafficking of immune cells. The session was completed by the presentation of Dr Danqing Min from the Royal Prince Alfred Hospital. In her project, she analyses the profiles of circulating monocyte (CD14+) and their subsets (CD16+/−) in diabetic foot ulcers and aims to correlate the observed changes of the circulating monocyte profiles to potentially predict wound healing outcomes.

Following lunch conference delegates were
treated to two sessions covering all aspects of chronic wounds. Prof Sue McLennan and her research team from the University of Sydney gave us an update of their research investigating matrix metalloproteinases and their role in diabetic wound healing, including Prof McLennan’s doctoral student Tara Ng whose research has focused particularly on the role of MMP-9. A/Prof Flavia Huygens from Queensland University of Technology presented her work her to date in understanding microbiome environment of chronic wounds. The final presenter of the session was Jessica Sutcliffe, a doctoral student from Prof Becker’s lab. Jessica’s presentation followed on from Prof Becker’s plenary presentation, focusing on the expression of gap junction proteins, connexin 26, 30 and 43, their presence in chronic wounds and role in keratinocyte migration.

The second session on chronic wounds following afternoon tea was patient outcome orientated, hearing a number of presentations on various treatments currently being investigated for the treatment of chronic wounds. Dr Melissa Fernandez took us through her research and preliminary clinical trial progress into the use of topical allopurinol for the treatment of chronic venous leg ulcers, and Dr Claudia Rutherford from the University of Sydney gave us an insight into the quality of life of patients who live with pressure ulcers. The final talk of the day was from doctoral student Daniel Broszczak who took the audience through his research which uses mass spectrometry techniques to analyse wound exudate and swabs from chronic wounds in the aim of discovering biomarkers indicative of healing wounds.

The conference dinner was held at the Sofitel Gold Coast, where conference delegates were treated to a delicious three course meal. During the dinner the society’s travel awards were awarded to doctoral students and early career researchers. Following dinner the room lights were turned down and the music turned up and the conference delegates danced away for the rest of the night.

Day 3
The final day of the conference was underway with a plenary from Prof Caren Nissen. Prof Nissen’s plenary session extensively covered her research into cell polarity and its role on cell fate and signalling. It was a great segue into the seventh session of the conference ‘Skin biology and cellular regeneration’. The first speaker of the session was Prof Rick Sturm from the University of Queensland gave an overview into his group’s genetic research on melanoma. Rick’s research group, Melanogenix, have studied the factors responsible for melanomas. His presentation mainly focused on complement of pigmentation and person’s specific single nucleotide polymorphisms. The following presentation was by Prof Pritinder Kaur from the Peter Mac Centre which delved more into the cellular environment of wound healing. Her group has found the important role of pericytes which not only differentiate into most cells but also secret important extracellular matrix components which are important in promoting wound healing. The next speaker in the session, Dr Tarl Prow, took us back to the topic of skin cancer. Queensland is the skin cancer capital of the world and Dr Prow’s team has developed an innovative device to take micro skin biopsies using a spring loaded lancet system with multiple needle probes. The scenario described was that this device could in the future be mailed to patients to perform biopsies themselves and send the samples directly to the clinic for analysis.

Dr Rodney Dilley from the University of Western Australia presented current scientific knowledge of the
repair process of the tympanic membrane. The membrane is a delicate structure separating the external ear from the middle ear and if perforated can take a long time to heal. The current treatment for these hard to heal membranes is silk fibroin myringoplasty grafts which promote the closure through increased cell proliferation and migration. The final talk in the session was by Mrs Xanthe Strudwick who presented the next chapter in the Flightless I (Flii) protein story. She presented preliminary data which demonstrated that 40% of mice that had overexpressing Flii could regenerate a proximal amputation compared to none in the wild type group. She hypothesised that Flii might play a role in the switch from reparative wound repair to regenerative. The great diversity of the session was capped off by the plenary speaker Prof Mike Philpott which was the first presentation on the science of hair follicles. Mike is a very charismatic speaker who had a wonderful story to share about how he developed the first culture of hair follicles in vitro. This culture method was the first time hair follicles had been grown in cell culture flasks which opened the door into the research of hair loss. The method is still used to date and has helped answer several questions about hair cell cycles, metabolism of follicles and potential therapeutic targets.

The first speaker of the ‘Cells and Tissue Engineering’ session, Prof Anthony Weiss, summarised a vast amount of his team’s work which focused on 3D fabrication of scaffolds devised from the protein tropoelastin. The protein itself as the name suggests has elastic properties which allow it to be easily shaped and capable of withstanding stress applied to it. The human protein is well tolerated and could potentially be used for multiple tissues targets, including the skin, ligaments and arteries. Dr Jacqui McGovern presented her recent work in corneum thickening in the human skin reconstruct (HSR). This thickening greatly reduces the amount of time the HSR can be used in experimentation. Several kallikreins were identified as being key players in the role of the thickening process and might be targeted in future work. Dr Shiva Akbarzadeh reported on the proof of concept work that her team is working on in developing a human skin equivalent to treat burns. This involved the culture of the patients own keratinocytes and fibroblasts for implementation on the burned areas following expansion of the cells. The preliminary data was promising and may provide a novel way to help burn wounds close. The final talk of the session was by Mr Christian Aloe who investigated two natural products for their anti-inflammatory capabilities. This was coupled with the new delivery mechanism of using nanoparticles. In combination these treatments in vitro showed a reduction in pro-inflammatory pathways.

Professor Nicolas Voelcker introduced the Biomaterials session by presenting his work on porous silicon as a means of delivering personalised chronic wound treatments. He was then followed by three talented ECR podium presentations. The first was by CSIRO researcher Dr. Megan Osmond who talked about her research into nanoparticle safety, particularly zinc nanoparticles found in sunscreen. Dr Brooke Farrugia then presented data on her ongoing work exploring the mechanisms through which mast cells respond to implanted materials. Dr Tara Fernandez concluded the session with her talk on plasma polymerisation of wound dressings in order to promote cell migration and proliferation, and therefore healing, in superficial wounds.

The final session of the conference focussed on parallels between cancer and wound healing. Associate Professor Nick Saunders began the ses-
AWTRS Conference 2014 Report

Session with an interesting talk about the E2F transcription factor and its complex involvement in squamous cell carcinomas. Miss Lipsa Mohanty then presented some of her ongoing PhD work investigating the potential role of the epithelial to mesenchymal transition process during wound healing using a human skin reconstruct (HSR) model. Dr Roberta Mazzieri then went on to speak in depth about Tie-2 expressing macrophages in tumour angiogenesis, growth and metastasis. The final talk of the day was presented by Associate Professor Kiarash Khosrotehrani and focussed on Sox18 and the hierarchy of endothelial progenitor cells during angiogenesis.

Dr Rachael Murray concluded the day by announcing the recipients of prizes for the best ECR podium presentations and posters. Congratulations went to Xanthe Strudwick (University of South Australia) and Jessica Sutcliffe (University College London), who were awarded first and second places for their podium presentations, and to Joan Röhl and Arnulf Compay (both from Queensland University of Technology) who were awarded first and second places for their posters.

A final thank you to Dr Rachael Murray and the Conference Organising committee for an all-round informative and well-organised AWTRS conference. The next AWTRS meeting is scheduled for 2016 to be held in Melbourne, Australia.

Written by AWTRS Travel Awards Recipients—Dario Stupar (QUT), Xanthe Strudwick (UniSA), Joan Röhl (QUT), Andrea Zaharia (QUT), and Brooke Farrugia (UNSW).

Travel Report—HRI

Learning from the Heart

Training at the Heart Research Institute, Sydney

By James Broadbent, Research Fellow, CRC for Wound Management Innovation

This trip actually began in 2012 following the submission of a grant regarding oxidative stress in chronic wound biology. A few months later a reviewer suggested that we should seek a collaborator with a more specific track record in oxidative biology. As a result I contacted Professor Michael Davies, Leader of the Free Radical Group and Director of the Heart Research Institute (HRI; https://www.hri.org.au/) in Sydney. After numerous emails Prof Davies was able to meet while in Brisbane on other business. Our discussions uncovered some interesting ties between his work on cardiovascular biology and mine on chronic wounds and as such we agreed to a collaboration of sharing samples and expertise. A number of Western blots later we knew there was something worth further investigation. Unfortunately by this time the grant was unsuccessful; however, the AWTRS had just announced the training and travel awards. This seemed like a great opportunity to get a better handle on the impact of protein oxidation in chronic wounds and to acquire some new skills.

On November 17 (my 29th birthday) I flew to Sydney and made my way to the hipster student...
suburb of Newtown. I was greeted with some of the worst wet weather in 12 years; however, I wasn’t going to let it get in the way of my only free time before starting in the lab so I braved the wind and rain to get to the Zumbo café for his famous macarons. It was worth it.

The next morning I met Prof Davies Post-doc, Dr Jihan Talib, at HRI. After a tour of their impressive laboratory and catch up over a coffee it was time for our meeting with Prof Davies right before he took off to the USA for a week-long conference. We discussed the work scheduled for the week and some opportunities for joint grant applications as well as some assays to try for validation of an antibody that we both had mixed results with. It was time to get stuck into the crux of the trip: acquiring some new skills and data.

Amino acid analysis involves the detection and quantification of amino acids and amino-acid related molecules in a given sample. During my PhD my proteomic investigation suggested that there would be evidence of amino acid modification in the environment of chronic wounds due to oxidative imbalance. With Jihan’s help we were planning on performing some amino acid analysis on wound fluid from chronic and acute wounds. I had already shipped samples to the laboratory and Jihan had prepared all the required buffers. Being risk-adverse, we set about processing just half of the samples. After a few hours of de-lipidation and precipitation, we left the samples overnight for complete protein hydrolysis. I then had just enough time for Jihan to show me a method for quantifying sulphydryl groups. I ran a test plate and acquired the absorbance data just before my visitor’s hours ran out.

Day two began with further processing of the samples for amino acid analysis. After a few hours we had the samples and standards on the HPLC for analysis. The data acquisition was rapid and I was able to analyse the data before the end of the day with the help of a spreadsheet given to me by Jihan. It was a really satisfying moment when GraphPad gave multiple stars (i.e. significant P-values!) later that afternoon. I had just enough time for debriefing with Jihan before leaving at the end of the day.

Days three and four gave the opportunity to process the remaining samples and engage in some of the culture of the institute; lunch on the balcony and the regular weekly seminars. After pooling the data from both sample batches GraphPad continued to report multiple stars; it had been a productive trip. After a final debrief on Friday we made plans for follow-up work and the pitch of the paper. This left enough time for a quick and delicious Newtown Vietnamese dinner and a long cab ride to the airport (which was closed due to a storm). After a nearly 3 hour delay I was on my way home; the trip was over.

Over the week I learned two new techniques, gained two valuable data processing spreadsheets and enjoyed the opportunity to work in a new environment. I have to thank Jihan and Mike Davies for hosting me at the HRI, the School of Biomedical Sciences at QUT for matching my original award, the support of the Tissue Repair and Regeneration Program and of course the AWTRS for giving me this valuable opportunity in the first place. I’m now looking forward to publishing the data and submitting an updated grant application - fingers crossed for two successful outcomes.
Conference Report—SAWC/WHS and SID

The Symposium on Advanced Wound Care/Wound Healing Society (SAWC/WHS) Meeting and Society for Investigative Dermatology (SID) Annual Meeting 2014

Dr Zlatko Kopecki
Mawson Institute, University of South Australia

I was fortunate to receive an AWTRS International Travel Award which enabled me to attend both The Symposium on Advanced Wound Care/Wound Healing Society (SAWC/WHS) Meeting in Orlando, Florida, USA, and Society for Investigative Dermatology (SID) Annual Meeting in Albuquerque, New Mexico, USA in April-May 2014. I was able to present my work on the role of Flightless protein on the development of Squamous Cell Carcinoma and gain invaluable feedback from experts in the field. In addition, the time between the two conferences was spent at the laboratory of our collaborators Prof Mei Chen and Prof David Woodley, at the University of Southern California, Norris Comprehensive Cancer Centre where I was able to learn new methods using Co7 null mice and discuss collaborative projects which we wish to undertake.

The SAWC/WHS meeting was held at the Gaylord Palm Hotel and Convention Centre and was attended by over 1500 participants bringing together clinical experts and scientific leaders focusing on multidisciplinary approaches for improved wound healing. The first day of the conference was for WHS members only with the opening Hunt Lecture presented by Prof Weinberg who described his major contributions to the basic biology of cell growth and how his research has advanced the field of wound healing and concluded with a vision for the future of research. The WHS Keynote speaker was Prof Martin, from Bristol, England who described how the use of several genetically tractable model organisms, from *Drosophila* through to mice, could be used to uncover fundamental mechanisms of repair and enable development of new wound healing therapeutics for humans. Lastly his address focused on his latest work examining the differences in inflammation between wound and tumour microenvironments. The highlight of the first day was the innovative International Session attended by about 100 participants where for the first time our own members of the AWTRS were able to use Skype to present their findings at this meeting. Prof Cowin described the role of Flightless protein in inflammation and wound healing. Assoc/Prof Jackson explained the inhibitory role of Activated Protein C in chronic wounds and Dr Murray explained the importance of macrophage mediated inflammation during wound repair.

The rest of the meeting was enjoyed by both SAWC and WHS members over the three days with 61 sessions on range of topics including acute wounds, biomaterials, chronic wounds, fibrosis, inflammation, emerging technologies and translational clinical wounds research. The general plenary session was highlighted with a talk by Dr Kaplan who presented the history of matrix use in wound healing and tissue regeneration, highlighting the innovative new ways that materials are being developed and deployed to treat acute and chronic wounds. Young researchers had a chance to enjoy the Meet the Mentors Session which was designed to encourage networking and build relationships between young investigators and their mentors in the field of wound healing. Young scientists were able to interact with mentors and hear about strategies for developing independent funding and niche of research, career building, publishing and authorship, translational research and product development. A number of conference
attendants were also able to participate in the 5km Run/Walk raising much needed funds for the Wound Research Foundation.

The Society for Investigative Dermatology (SID) Annual Meeting was another very successful and well-attended meeting held in Albuquerque Convention Centre, New Mexico. Albuquerque offered a unique blend of cultures; spectacular geography and many historical sites and cuisine that celebrate the Spanish, American Indian and Anglo cultures but still define New Mexico. The first day of this meeting was highlighted by the Dystrophic Epidermolysis Bullosa-America Scientific Advisory Board Session where experts in skin blistering diseases were able to share their latest progress in clinical trials using Col7 therapy and describe the role for recombinant Col7 as a therapeutic option for treatment of wounds. State of the Art Plenary sessions included talks by Dr Ito presenting his data on the role of epithelial stem cells from the hair follicle in organ regeneration and a talk by Dr Varga on aetiology and latest treatments in systemic sclerosis. The second day of the conference was highlighted by a Eugene M. Farber Lecture, with Dr Gelfand presenting the results of the large population based and multi-centred clinic based studies on patients with psoriasis evaluating the cardiovascular risk and comparative effectiveness of different treatment modalities in this patient group. This meeting also incorporated a Wound Healing Symposium, of which talks by Prof Mustoe; who explain the role of epidermis and transepidermal water loss in signalling and scarring outcomes; and Prof DiPietro; who discussed the importance of fine balance in modelling and understanding the immunologic and inflammatory process during wound healing; attracted the most interest and vivid discussion with fellow attendees. The social evening for this meeting was at the Albuquerque Museum of Art and History where attendees were able to admire a vast collection of historical artefacts, works of art and photographs being exhibited. While some enjoyed exploring the works of indigenous people and Spanish colonial art others enjoyed dancing to live music at the outdoor amphitheatre. Unfortunately, due to windy weather, the scheduled tethered hot air balloon rides were cancelled! Some attendees of the conference visited the New Mexico capital, Santa Fe and/or the beautiful mountain range Sandia Mountains (Tiwa Pueblo “where water slides down”). The remainder of the conference included concurrent mini-symposia on growth factors, cell adhesion, auto-immunity, inflammation, genetic diseases, skin cancer and human clinical research and therapeutics.

Overall, both meetings were a great success and allowed me to present my research at the international stage and not only learn about the recent advances in my chosen field of research but also provide an opportunity for me to make new friendships and collaborations in the future. I would like to thank the AWTRS for the travel grant which allowed me to attend these conferences.

Dr Zlatko Kopecki
The 9th Pan Pacific Connective Tissues Societies Symposium saw researchers from across the globe congregate in Hong Kong for just over 3 days of fantastic food, breathtaking scenery, and of course, to hear about the latest cutting edge in research being carried out in matrix biology. Conference attendees were witness to research that covered many aspects of the extracellular matrix through 40 presentations, as well as multiple poster sessions, with the displaying of over 60 posters. The PPCT Symposium is held every 2 years, and was first initiated as an international meeting to gather researchers from countries that border on the Pacific Ocean, where this meeting has grown to attract researchers to disseminate their research from all around the world.

The conference commenced with the opening reception on Sunday afternoon, which was a pleasant space for colleagues to catch up, as well as the chance for people like myself attending their first international matrix biology conference, to meet many of the leaders within this field. Following the reception the science commenced with opening plenary lecture was given by Prof Karl Tryggvasson, Duke-NUS Singapore, on ‘Lamins; the family of basement membrane proteins and the roles that the multiple isoforms of this protein play in specific biological roles’.

Monday morning and all of the conference delegates were pickup up from our hotel, which was right on Hong Kong harbour, with a fantastic view over to Kowloon, and we made our way to the conference venue at the Hong Kong Academy of Medicine in Aberdeen, on the opposite side of Hong Kong Island. The central theme of this conference was the extra cellular matrix niche, with the next three days of science covering research that delved into many aspects of this research field.

The conference commenced looking at the matrix niche and the matrix in development and diseases. The role of Type II pro-collagen in embryonic and foetal development was presented by Prof Kathy Cheah, University of Hong Kong, who showed that presence of the α and β isoforms different in their expression during foetal development, as well as interactions with these isoforms and a number of different BMPs. Presentations that followed covering the matrix niche reported on the role that laminins play in; stem cell proliferation, cardiomyocyte differentiation, as well as the development of a synthetic basement membrane. A personal highlight from the symposium was a presentation given by Prof Peter Fiedl, University of Texas, who presented his work on ‘Tissue niches for cancer cell invasion in vivo’. 3D invasion models of cancer cell migration’. Prof Fiedl’s presentation showcased imaging techniques his research group uses to capture cell migration and invasion in 3D cancer models.

The second half of the day research saw research detailing various matrix components and
their role in development and disease. Dr Shireen Lamade, Murdoch Childrens Research Institute Australia, presented her research regarding mutations in the protein TRPV4 mutation and the role that this protein plays in skeletal development and disease. Attendees also enthralled by research regarding collagen X mutations and ER stress, presence and the role of chondroitin sulphate proteoglycan 5 in breast cancer, as well as the role of procollagens in health and disease.

The following two days were jam packed with presentations covering all aspects of the extracellular matrix; from cell-matrix interactions, the role of matrix in inflammation and regeneration to the regulation of matrix homeostasis. Out of all the presentations there were two in particular that were personal highlights, the first was a presentation by an ECR researcher Dr Lauriane Janssen from University of Liege, Belgium. Her presentation was on “ADAMTS3 deficiency is embryonic lethal in mouse and zebrafish” where in addition to presenting her work on the function of ADAMTS3 in embryonic development, it was a fantastic example of the use of a knockout zebrafish model, which have over the past few years become increasingly more popular as an animal model to investigate gene knockouts. The second was a presentation by Dr Uwe Hansen, Department of Physiological Chemistry and Pathobiochemistry, Germany, who was introduced to the audience the expert in collagen electron microscopy and having spent the majority of my doctoral studies characterising materials using electron microscopy I am always fascinated with the use of this technique. Dr Hansen presented his work detailing the distribution of the different collagen alpha chains with the upper dermis of the skin (which happens to be one my new areas of fascination!) using electron microscopy, in particular the detection of the α5- and α6-chains of collagen IV.

Being quite new to the field of matrix biology I found attending the Pan Pacific Connective Tissues Conference an extremely valuable experience. Not only did I get to listen to, and take in 3 days of brilliant research I was fortunate to meet many fellow matrix researchers, of whom I look forward to seeing at meetings in the future and forging collaborations with. I would like to thank the Australasian Wound and Tissue Repair Society for the Travel Grant which allowed me to attend the PPCT conference.

Dr Brooke Farrugia
b.farrugia@unsw.edu.au

Enjoying the conference and making new connections. My supervisor Dr Megan Lord, Prof Barbara Chan (University of Hong Kong), and myself (L to R)
One Minute with an AWTRS Member

Xanthe Strudwick, PhD Candidate, University of South Australia

What are you working on now?
I am in the third year of my PhD investigating the Role of Flightless I in Tissue Regeneration using a model of digit regeneration in our Flightless I heterozygous knockout and over expressing transgenic mice.

What/who motivates and inspires you?
Having two young children motivates me to work hard and leave plenty of time for playing but my inspiration comes from the many talented researchers making a difference to quality of life of others.

Where did you study previously?
I am currently at the University of South Australia as a PhD candidate but I began my candidature at the University of Adelaide when our lab was a part of the Women’s and Children’s Health Research Institute. My undergraduate is a little complicated also, having completed both a Bachelor of Applied Science (Biotech) at QUT alongside a degree in the Humanities majoring in Sociology and Applied Ethics. I then came down to Adelaide ten years ago and completed my honours in Health Sciences at the University of South Australia when I began working with Allison Cowin on the Flightless I protein.

What made you choose tissue repair?
I am interested in understanding the biological processes which give rise to regeneration versus repair, with the aim of improving the wound healing outcomes for the thousands who suffer injuries each and every day.

What do you hope to achieve in the next 12 months?
I would really love to have my thesis completed in the next year! So that means having finally figured out some of the mechanisms of action and signalling pathways of Flightless I.

Favourite book?
I love the classics, particularly Austin and Shakespeare. I have their complete works.

Favourite holiday destination?
Kaikoura on the South Island of New Zealand. It is one of the most special places in the world, and not too far away.

If I wasn’t doing this (job) I’d be....
Philosophising about the justice and ethics of governance… luckily research into tissue repair is a lot more practical!
Upcoming Meetings

2014 Cutaneous Biology Meeting
22nd-26th September 2014
Moreton Bay Research Facility
North Stradbroke Island, Queensland, Australia

INTERNATIONAL SPEAKERS
- Daniel Aberdam, France (Epidermal Gene Regulation)
- Irene Leigh, UK (Skin Disorders)
- Dennis Roop, USA (Stem Cell Biology)
- Fiona Watt, UK (Epithelial Differentiation)
- Sabine Werner, Switzerland (Wound Healing)

For more information visit the website: www.asdr.org.au
Upcoming Meetings

ETRS ANNUAL CONGRESS 2014
September 10th-12th

The 2014 annual meeting in Edinburgh has an exciting programme of lectures and invited speakers across all areas of tissue repair; from biofilms to stem cells and from the laboratory to the patient.

Speakers will include:

Alicia El Haj          UK
Denis Barritault      France
Jamie Davies          UK
Terje Espevik         Norway
Stuart Forbes         UK
Boris Hinz            Canada
Niels Hoiby           Denmark
Paul Martin           UK
Esther Middlekoop     Netherlands

The on-line Programme is available on the ETRS web-site including sessions, speakers and events. The programme will be complimented by an active social schedule including the annual dinner at the home of the Edinburgh Festival.

Abstract Submission deadline May 30th

We look forward to welcoming you to the UK

Website: ETRS.org/ETRS2014    Follow us on Twitter: @ETRS2014
Upcoming Meetings

WORLD UNION OF WOUND HEALING SOCIETIES

5TH CONGRESS OF WUWHS
One Vision, One Mission

FLORENCE, ITALY
SEPTEMBER 25-29, 2016

www.wuwhs2016.com
info@wuwhs2016.com

HOSTING SOCIETIES
AIUC
ASSOCIAZIONE ITALIANA
LEUCERI CUTANEE - ONLUS
www.aiuc.it
AISLEC
ASSOCIAZIONE INTERNAZIONALE
PER LO STUDIO DELLE LESIONI CUTANEE
www.aslcer.it

CO-HOSTING SOCIETIES
EPUAP
EUROPEAN PRESSURE INJURY
ADVISORY PANEL
www.epuap.org
ETRS
EUROPEAN TISSUE REPAIR
SOCIETY
www.erts.org

stay tuned
AWTRS Conference
Melbourne 2016

The 2016 Conference of the Australasian Wound and Tissue Repair Society will be held in Melbourne November 6th-8th at The Melbourne Convention and Exhibition Centre.

MCEC is set on the banks of the iconic Yarra River, is just a 20 minute drive from Melbourne airport and a short stroll to the city centre where you can explore cafes, eclectic restaurants, lush parklands, incredible fashion and inspiring galleries and museums. The first centre in the world to be awarded a 6-Star Green Environment rating.
Upcoming Meetings

Asia Pacific Conference on Diabetic Limb Problems, Melbourne 2014

The 2014 Conference of the Asia Pacific Association for Diabetic Limb Problems will be held in Melbourne, November 14th-15th at the Parkville Campus of Monash University, Melbourne.

The Parkville Campus of Monash University is set in beautiful gardens and close to the city centre. The conference will feature leading speakers from Australia and the Asia Pacific region in the areas of Endocrinology, Podiatry, Infectious Diseases, Vascular and Orthopaedic Surgery. For registration information contact A/Professor Geoff Sussman (geoff.sussman@monash.edu)
The molecular and cellular basis of regeneration and tissue repair

6 – 10 September 2014
Sant Feliu de Guixols, Spain

SPEAKERS
Enrique Amaya
University of Manchester, UK
Alexandra Bely
University of Maryland, US
Michael Brand
Centre for Regenerative Therapies Dresden, DE
Jeffrey T. Corwin
University of Virginia, US
Isabel Fariñas
University of Valencia, SP
Patrizia Ferretti
University College London, UK
Amanda Fisher
Imperial College London, UK
Brigitte Galliot
University of Geneva, CH
José García-Arrarás
University of Puerto Rico, PR
Ellen Heber-Katz
The Wistar Institute, US
Thomas Holstein
University of Heidelberg, DE
Kimberly Mace
University of Manchester, UK
Jelena Mann
Newcastle University, UK
Paul Martin
University of Bristol, UK
Nadia Mercader
CNIC, SP
Sumihare Noj
University of Takeda, JP
Ken Poss
Cold Spring Harbor Medical Center, US
Thomas Reh
University of Washington, US
Hans R. Scholer
NHGRI, National Institutes of Health, US
Emili Saló
University of Barcelona and IBUB, SP
Florenci Serras
University of Barcelona and IBUB, SP
Andras Simon
Kemiteriski Universitetet, SE
Jane Sowden
University College London, UK
Elly Tanaka
Centre for Regeneration Therapies Dresden, DE
Randal Voss
University of Kentucky, US
Ricardo Zayas
San Diego State University, US

REGISTRATION
Deadline before 30 APRIL 2014

Includes:
• accommodation in twin room sharing with another participant
• all meals, coffee breaks and drinks
• conference dinner
• group transportation from/to the nearest airport

http://events.embo.org/14-regeneration
Upcoming Meetings

Second ISPeW
International Symposium
Pediatric Wound Care

1st ANNOUNCEMENT

DECEMBER 11-12, 2014
ROME - Italy

SEAPHRICUM, Pontifical Theological Faculty St. Bonaventura

MAIN TOPICS

Pediatric Pressure Ulcers
Prevalence and incidence
Pressure ulcer prevention: Nursing and quality improvement
Device-related pressure ulcers

Technology and wound care in children
Dressing time, new materials
Debridement for complex wounds in pediatric patients
Dermal substitute and skin substitutes

Multiloculated treatment paradigms in Pediatric Wounds
Palliative wound care
Abdominal wounds in preterm and neonatal age patients
Scars: hypertrophic scars and keloids

New Trends in NPWT
Is a randomized clinical trial required?
Negative-pressure wound therapy in preterm and neonates
Wound healing of critically colonized and infected wounds

Team and Surgical Strategies
Basic surgery for burns during humanitarian missions
Surgery for Complex Wounds in Children
Challenging surgical scenarios in infants and children

Basic Science and Research
Basic science — The ontogeny of the skin
Research in pediatric wound care
Growth factors and surface interactions

PRESIDENT
Guido Ciccardi, Rome, Italy

VICEPRESIDENT
Marco Romenelli, Pisa, Italy

PRESIDENT ELECT
Sandeep G. Rasvandi, Cincinnati, U.S.A.

SECRETARY GENERAL
Carola M. Durante, Rome, Italy

RECORDER
Giorgio C. La Scala, Geneva, Switzerland

EMERITUS
Robert Kiesner, Miami, U.S.A.

BOARD COUNSELORS
Sadamori Akita, Niigata, Japan
Kathryn G. Benabe, St. Louis, U.S.A.
Ella Ricci, Turin, Italy
Anna Barbara Schlör, Zurich, Switzerland
Kara Shih, Cincinnati, U.S.A.
AWTRS Membership

<table>
<thead>
<tr>
<th>1 Year</th>
<th>Membership</th>
<th>3 Year Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary Annual Membership</td>
<td>$80</td>
<td>3 Year Ordinary Membership</td>
</tr>
<tr>
<td>Student Annual Membership</td>
<td>$30</td>
<td>3 Year Student Membership</td>
</tr>
<tr>
<td>Corporate Membership</td>
<td>$360</td>
<td></td>
</tr>
</tbody>
</table>

To JOIN or RENEW Membership

go to www.awtrs.org click on Membership

MEMBERS' BENEFITS INCLUDE:

**AWTRS Newsletter** - contains news of upcoming meetings, extensive coverage of meetings and workshops, research highlights, job adverts and much more.

**Free subscription to AWMA journal Wound Practice and Research** - one of the primary sources of information for Medical, Nursing, Allied Health, Wound Care Practitioners and Wound Research Scientists throughout the Australasia-Pacific region.

**Reduced subscription rates to the leading wound research journal: Wound Repair and Regeneration.**

**Advance notification of the AWTRS biennial meeting and focus meetings**

**Discounts on registration rates for the AWTRS conferences** - members are entitled to a discount on the regular registration fee.

**Travel Awards for Early Career Researchers/Students at the AWTRS Biennial Meetings** - details of these travel awards are posted on the website prior to the meeting.

**Young Investigator Awards at the AWTRS Biennial Meetings** - details posted to the website, prior to the meeting.
AWTRS Executive Officers and Committee Members 2014

President: Dr Rachael Murray  
Institute of Health and Biomedical Innovation  
Queensland University of Technology,  
Phone +61 7 3138 6801  
Fax: +61 7 3138 6030  
Email: rachael.murray@qut.edu.au

Vice President: Assoc/Prof Chris Jackson  
The Sutton Arthritis Research Laboratories,  
Kolling Research Building, Royal North Shore Hospital,  
Sydney, St Leonards, NSW, 2065, Australia  
E-mail: chris.jackson@sydney.edu.au

Treasurer: Assoc/Prof Geoff Sussman  
Faculty of Medical and Health Science  
University of Auckland  
Faculty of Medicine Monash University  
Phone +61 3 9903 9619  
Fax +61 3 9903 9124  
Email: Geoff.Sussman@monash.edu

Secretary: Dr Leila Cuttle  
Tissue Repair and Regeneration Program, Institute of  
Health and Biomedical Innovation, QUT  
Centre for Children’s Burns Research  
Queensland Children's Medical Research Institute, Royal  
Children's Hospital  
Brisbane  
E-mail: leila.cuttle@qut.edu.au

Early Career Representative: Dr Zlatko Kopecki  
Centre for Regenerative Medicine Mawson Institute  
University of South Australia  
Phone: +61 8 830 26384  
Email: zlatko.kopecki@unisa.edu.au

Assoc/Prof Pritinder Kaur  
Epithelial Stem Cell Biology Laboratory  
Peter MacCallum Cancer Centre,  
St Andrew’s Place, East Melbourne  
Phone: +613 96563714  
pritinder.kaur@petermac.org

Dr Lyn Wise  
Department of Microbiology and Immunology  
University of Otago  
Otago, New Zealand  
Phone: +64 3 479 7723  
Email: lyn.wise@otago.ac.nz

Assoc/Prof Susan McLennan  
Medicine, Central Clinical School  
University of Sydney  
Sydney, NSW 2006  
Phone: +61 2 9515 5185  
Email: sue.mclennan@sydney.edu.au

Dr Rodney Dilley  
Ear Science Centre  
School of Surgery, UWA  
2nd Floor, M Block,  
Sir Charles Gairdner Hospital  
MS09, Nedlands, WA 6009  
Email: Rodney.dilley@earscience.org.au

Dr Kerry Manton  
Institute of Health and Biomedical Innovation  
Queensland University of Technology  
Phone: +61 7 3138 6214  
Email: kerry.manton@qut.edu.au

Dr Anthony Dyer  
Wound Management Innovation CRC  
Level 2, 8 Carraway St, Kelvin Grove,  
Brisbane, QLD 4059  
Email: Anthony.Dyer@woundcrc.com