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Australasian Wound & Tissue Repair Society

Volume 3, Issue 2, July, 2009

Society News

Here we are, already half way through the year wondering where the time has gone. Many of our members will be looking forward to travelling to the Northern Hemisphere to attend and showcase some of the wonderful research occurring in Australia at the 5th joint meeting of the European Tissue Repair Society & the Wound Healing Society in Limoges, France in August 2009. It will be a great opportunity to catch up with our fellow wound & tissue repair scientists from Europe, America, and Asia to learn about the latest research and to form new collaborations with some of the best scientists within our field. A bit of French sunshine will also not go amiss particularly for those of us living in the colder Australian States!! For those of you not able to attend this meeting, you can look forward to the 2nd AWTRS meeting to be held in Perth 22-24th March 2010. Registration is now open and abstracts and posters can be submitted at <http://awtrs2010.mtci.com.au>. To see the flyer turn to page 9 of this issue.



The organizing committee, ably led by conveners Hilary Wallace and Mark Fear, is working tirelessly to put a

marvelous program together and the calibre of national and international speakers lined up is absolutely outstanding. Speakers are attending from Canada, the UK, Switzerland and the Netherlands, to give an in-depth perspective of international research in the field. National speakers are from widely-dispersed Australian Universities and Institutes and represent all of the major cities: Adelaide, Brisbane, Melbourne, Perth, Sydney. Topics include: Inflammation and immunity in wound healing, Fibrosis, scarring and wounds; Novel mechanisms of repair; Regeneration; Microorganisms and wounds; Chronic wounds - mechanisms and diagnostics; Pre-clinical models of wounds and healing and Frontier therapies: Biotherapeutics and biomaterials. So there should be something to catch everyone's interest. Speakers to date include Prof. Jeffrey Hubbell, Lausanne, Switzerland; Prof. Paul Martin, University of Bristol, UK; Prof. Cees Oomens, Eindhoven University of Technology, The Netherlands; Prof. Fiona Wood, AM, WA Burns Service WA; Prof. Prue Hart, Telethon Institute for Child Health Research; Prof. Hans Greissner, University of South Australia; Prof. Laura Poole-Warren, University of New South Wales; Prof. Rob Short, University of South Australia and Prof. Zee Upton, Queensland University of Technology. There will be sessions for new speakers and poster presentations will round off the scientific program. The Social program is developing well with a conference dinner and opening ceremony planned to highlight the wonderful Western Australian location. Please put the date in your diaries and plan to be there — it is certainly an event not to be missed!!

A/Prof Allison Cowin
President AWTRS

Research Profile: Burn Injury Research Unit - UWA

The Burn Injury Research unit (BIRU) at UWA was recently established by Winthrop Professor Fiona Wood. Prof. Wood is Director of the Burns service, Western Australia and has been a frontline clinician treating both pediatric and adult burn injuries for over 20 years. During this time, Prof Wood has seen the lifelong consequences of burn injury, and has driven improvements in clinical practice, education and research to try to improve the outcomes for burn patients.

Within BIRU, there is a multi-disciplinary team brought together to address various aspects of burn treatment, from pharmaceutical intervention through the physical rehabilitation. The team consists of molecular and cellular biologists, consultant surgeons, Allied health professionals and students working both in overlapping and distinct areas of burn injury.

One key aspect of the basic scientific research has been to better understand the systemic responses to localized injury and how these impact on scarring and long-term outcome. Whilst there has been a lot of research on the site of injury and topical agents to promote wound healing, we are interested in the response of the immune system, the nervous system and the bone marrow to burn injury. Recent work has suggested there are significant changes not only at the injury site but also at distal sites after the localized injury. We believe that understanding the mechanisms underlying these systemic changes, the impact these changes have on future wound healing, and how we can intervene in the systemic response will be key to changing the aims of wound healing research from scar reduction to tissue regeneration.



(L-R) Fiona Wood, Mark Duncan-Smith and Suzanne Rea - at Royal Perth hospital during the treatment of the patients injured in the explosion at Ashmore Reef.

Research Profile (cont): Burn Injury Research Unit - UWA

Linked to these studies of the systemic response, we are also interested in the effects of ageing on wound healing and scar formation. It is well described that wound healing changes with age, and it will be important to understand exactly how and why these changes occur, with a view to optimizing therapeutic intervention dependent on the age of the patient.

Other recent studies have included work to develop novel dressings, which has been based on initial findings that epithelial cells are sensitive to the nano-topography of the surface on which they are grown. Currently, we are conducting a pre-clinical study to see whether nano-topography may be manipulated to promote faster growth across wound surfaces to improve healing. We have also been studying tissue salvage at the time of injury, and whether inhibitors of specific pathways may

lead to less secondary cell death, and consequently smaller wounds, after injury, whilst extensive clinical work has been done to assess and generate much better outcome measures for patients. This is critical to better evaluate the interventions we are trying to develop for burn injury, and better assessments of the outcomes will make a big difference to our ability to analyze the effects of different interventions.

The areas of work within BIRU are varied, but linked by an overarching theme to improve the outcome for patients. This includes the small changes we can continually make to individual burn care, through to the ultimate goal of tissue regeneration, and 'scarless healing' for those suffering from a burn injury



(L-R) Back row: Richard Magenga (PhD student), Leigh Parkinson (PhD student), Natalie Morellini (PhD student), Dr Mark Fear, Dr Natalie Giles (postdoc)

(L-R) Front row: Daniel Haustead (BMedSci student), Katharine Adcroft (Research Assistant), Anastasia Usikov (Hons student)

Epidermolysis Bullosa — A Patient's View



My name is Kate Turner and for 20 years I have been living with the painful and restricting disorder, Epidermolysis Bullosa, (EB). Due to this genetic condition, the layers of my skin do not form properly and making me prone to constant wounds, blisters, contractures and scarring.

Every day acts like eating, walking and dressing can be a painful and slow process. In the earlier years of my life I had a gastrostomy tube. This enabled me to have overnight feeds to boost my weight which was an ongoing problem. Mind you since not having the tube I do eat just about anything, I love my food. I do have to be careful though as I have mild webbing in my oesophagus, just a matter of chewing my food more than usual.

Also in my earlier childhood years I had many operations to have my fingers released, which always ended up fusing back together due to the constant breaking down of the skin. Because of this it was my choice not to have these operations again. Even with the deformity of my hands I still manage to write and draw, which I enjoy passionately by using pen or pencils between my two fists.

I live with my mother, whom is my sole carer. Even though life for us is evolved around constant medical issues we do try our best to enjoy our life to the fullest. We have done a lot of special things which I'm sure would not have come about if I had been born without EB. Most sufferers however are unable to participate in any contact activities, and even being in a crowd may cause blistering and trauma to the skin. Our society revolves around appearances, thus making the life of an EB person emotionally and physically painfully. Currently, there is **NO CURE**, only treatment of the wounds.

We are involved in Dystrophic Epidermolysis Bullosa Research Association (DEBRA-SA) which my mother helped set up. Being involved in this group gives me the opportunity to have ongoing support. DEBRA-Australia national body greatest wish is to raise awareness of this condition.

To encourage compassion, tolerance and acceptance for the sufferers and their families and to let them know there is help and support. National projects in progress include Specialist Nursing Care, a professional register, investigating and implementing ways to help sufferers in their daily lives, raising much needed awareness to increase DEBRA's profile and to educate the general public and health professionals about EB and by raising money for vital research into finding a cure for EB.

Attending the National Conference makes it possible to catch up with others that have EB and continue in friendships that will last forever. Our state branch is also involved in promoting the awareness of EB and is holding a State Conference in November 2009. To read more about EB and learn about our activities or join our groups please visit www.debrasa.org

I am involved in a medical trial at the moment, which gives hope for all EB people.

Kate Turner



Working Towards Stronger Skin

SA State Conference November 30th 2009 Goodwood Community Centre

1pm-5pm

Keynote Speakers

Professor Dédée Murrell

Fibroblast based cell therapy and clinical advances in EB

Prof. Murrell is Head of Dermatology, St George Hospital, University of New South Wales, Kogarah, Sydney. She is also consultant dermatologist for Epidermolysis Bullosa (EB) at Sydney Children's Hospital.

Her special interest is blistering diseases: both autoimmune and inherited. Prof. Murrell is a world recognised expert in EB and a founder of the EB diagnostic laboratory in Sydney. She leads a research laboratory focused on EB pathogenesis and treatment and is conducting clinical trials on EB in Australia



Michael Fitzpatrick

DEBRA Australia: Past-Present-Future ... a father's journey



Michael Fitzpatrick is a dedicated supporter and advocate for DEBRA-Australia. He is President of DEBRA-Australia and has contributed significantly towards DEBRA Australia becoming recognised as a charitable organisation.

Michael is a parent of a child who suffers from EB and his involvement with DEBRA-Australia has raised much needed funds and awareness to support children suffering from EB.

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Mission Statement

DebRA Australia provides ongoing support and information for individuals, families, and professionals living and working with EB, ensuring all research and best practice treatments are investigated leading to improved quality of life for all.

EXPAND YOUR RESEARCH COLLABORATIONS THROUGH THE AWTRS WEB SITE

The AWTRS consists of numerous researchers from basic scientists through to clinicians, the majority of whom are actively involved in many different aspects of wound and tissue repair research. To promote collaboration between the different facets of wound and tissue repair research, the AWTRS is offering our members the chance to add their research interests and a link to their own website to the AWTRS website (www.awtrs.org).

Benefits of having an AW&TRS member's research directory on the web site:

1. Establishing a research contacts database will facilitate collaborations in wound and tissue repair research.
2. Help to expand your research collaborative network with colleagues and others working in the areas of wound and tissue repair.
3. Have you ever had a really interesting result but do not have the expertise in the laboratory to follow it up? The useful links researchers' page will allow you to search and contact the most suitable researcher with the appropriate expertise.
4. Enable students and postdoctoral scientists who would like to work in the field of wound research to search for potential laboratories to work in.

How do I go about adding my name, research interests and web page link to the AWTRS web site?

1. Become an AWTRS member (or renew your membership for 2009).
2. E-mail Rachaelm@chw.edu.au with these details:
 1. Your name.
 2. No more than 5 key words that best describe your research.
 3. Your research page web URL.

We look forward to hearing from you.

Ethical Use of Animals — Geoff Dandie ANZCCART

The Ethical Use of Animals in Wound Healing Research

The old adage of animal experimentation “Good ethics is good science” has never been more accurate or relevant than it is today. During 2009 we are celebrating the 40th anniversary of “*The Australian Code of Practice for the Care and Use of Animals for Scientific Purposes*” (The Code) – which is currently in its 7th edition. 2009 is also the 50th anniversary of the principles of the 3Rs (Replacement, Reduction and Refinement), which were first introduced in the book “*The Principles of Humane Experimental Technique*” by Bill Russell and Rick Birch.

Like all areas of biomedical research that rely heavily on the use of animal models, the discipline of wound healing research and the validity of experimental data generated by its disciples relies very heavily on ensuring that the welfare of all animal subjects and guaranteeing that the animals are in peak condition with appropriate levels of anaesthesia, analgesia employed as required to ensure that experiments are not compromised by uncontrolled parameters associated with pain or distress.

While we gently progressed into the age of genetically manipulated animal models a decade or so ago, we also moved into a phase of more precise and carefully controlled experimentation.

This has meant the end of the era when naïve concerns about the appropriate use of analgesics being an additional experimental variable being recognised as misguided. Science has also acknowledged that major changes in the nervous system, the endocrine system and the immune system that result from uncontrolled pain or distress are clearly major compounding factors in such experiments. While administration of appropriate analgesics for example is certainly an additional variable in an experimental protocol, at least it is a variable for which adequate controls can be employed.

There has been a seemingly unbreakable link between investigation of wound healing and animal based research for a very long time. This has not just been restricted to specific wound healing studies though as veterinarians and biomedical researchers involved with studies requiring recovery surgery on animals have been acutely aware, problems arising from scar tissue formation (including adhesions) and the effects they can have on a wide variety of parameters ranging from lymphatic draining patterns, mobility, self mutilation and risk of infection. It has long been recognised that warning signs like localised inflammation need to be acted upon immediately if problems associated with the formation of excessive scar tissue are to be avoided.



Ethical Use of Animals in Experimentation — Geoff Dandie

This has meant that refinement of methods used with the express aim of minimizing scar tissue formation have been an important part of both improving the outcome for animals undergoing experimental or clinical surgeries as well as increasing our working knowledge of wound management. This has proven to be yet another example of good welfare and good scientific outcomes occurring in parallel.

Most researchers are happy to admit that they have to work pretty hard to keep up to date with the international literature in their discipline, so the prospect of also having to keep up to date with advances in animal welfare and related research methodology is daunting.



Dr Geoff Dandie, ANZCCART

Today, the process of revising the Code has already begun and so at some stage in the next few years, the 8th Edition will be published. Again, this will mean a need for researchers to familiarize themselves with any changes in their operating environment that are a result of the new Code. All these factors mean that researchers working with animal models might be well served if they are familiar with ANZCCART and the services and advice they offer. The easiest way to do this is to keep a regular watch on the ANZCCART website www.adelaide.edu.au/ANZCCART/ and make full use of the services provided – particularly the email lists which can mean important information can come to you rather than having to chase it.

Good animal welfare **IS** good science and ANZCCART has a great interest in the linkage between these two important outcomes.



AWTRS Conference 2010—Perth



AWTRS 2010 ~ *Crossing the Boundaries*

22-24 March, 2010 ~ Perth, Western Australia



The Australasian Wound and Tissue Repair Society invites you to join us for our 2nd Conference, being held at the Perth Convention and Exhibition Centre, from March 22-24, 2010 - an exciting Scientific program in the exciting host City of Perth!

on-Line Registration is now open:
<http://awtrs2010.mtci.com.au>

Research themes include:

- Inflammation & immunity in wound healing
- Systemic responses in wound healing
- Fibrosis and scarring
- Advanced biomaterials & biotherapeutics
- Microorganisms and wound healing
- Pre-clinical models of injury & repair
- Chronic wounds

AWTRS 2010 is followed by the Australian Wound Management Association (AWMA) 2010 Conference with attractive reciprocal membership discounts.

Convenors:

Dr Hilary Wallace, *The University of Western Australia*

Dr Mark Fear, *McComb Foundation*

Secretariat: awtrs@mtci.com.au

Professor Paul Martin (UK)
Wound healing and inflammation

Professor Jeffrey Hubbell
 (Switzerland) *Tissue engineering*

Professor Cees Oomens (The Netherlands)
Molecular and biological basis for wound responses to pressure

Professor Fiona Wood (Aus)
Systemic responses to skin injury

Professor Zee Upton (Aus)
VitroGro®: from bench to bedside

A/Professor Prue Hart (Aus)
The skin immune system

Professor Hans Griesser (Aus)
Prevention of bacterial colonisation of biomaterials surfaces and implants by ultrathin antibacterial coatings

Professor Laura Poole-Warren (Aus)

Professor Rob Short (Aus)
Novel biomaterials for wound application

<http://awtrs2010.mtci.com.au>

Upcoming Wound & Tissue Repair Meetings 2009

ETRS/WHS

The European Tissue repair Society & The Wound Healing Society are holding their 5th Joint Meeting in Limoges, France in 2009 from August 25-29.

The venue for the meeting will be the Faculty of Law and Economic Sciences buildings in the centre of Limoges. Limoges is a medium-sized city on the banks of the river Vienne in South-West France. The city is easily accessible by train (3 hours) from Paris (Gare d'Austerlitz). The city is also easily accessible by road and Limoges has a small international airport (Limoges—Bellegardes) which has flights to various European cities as well as connections to Paris and Lyons. Limoges is particularly well connected to the UK with flights to London (Stansted), Liverpool, Nottingham and Southampton.

The meeting will have a mix of basic science and clinical presentations and we hope there will be a strong Australian flavour to the meeting, including several invited speakers.

Further information about the conference can be found at the conference organiser's website at <http://www.objectif-congres.com>



Matrix Biology Society Meeting—Barossa Valley, SA 11th—14th October, 2009

Topics to be covered at this meeting are:

- Wound healing and tissue remodelling
- Skeletal development
- Extracellular matrix assembly
- Stem cells and tissue engineering
- Matrix turnover
- Metastatic disease
- Cartilage/bone/dentin
- Extracellular matrix abnormalities



Further details are available on the ASN Events website:

<http://www.asnevents.com.au/mbsanz/>

Upcoming Wound & Tissue Repair Meetings 2009



5th
JOINT MEETING OF
THE EUROPEAN TISSUE REPAIR SOCIETY
&
THE WOUND HEALING SOCIETY



AUGUST 25th - 29th 2009
 LIMOGES - FRANCE

With the participation of
 The Australian Wound Management Association
 The Japanese Society for Wound Healing
 &
 The Australasian Wound & Tissue Repair Society

SCIENTIFIC PROGRAM COMMITTEE

Alexis Desmoulière, Limoges - France
 Sabine Eming, Cologne - Germany
 Boris Hinz, Lausanne - Switzerland
 David Thomas, Cardiff - UK
 Adrian Barbul, Baltimore - USA
 Jeffrey Davidson, Nashville - USA
 Robert Kirsner, Miami - USA
 Ian Darby, Bundoorra - Australia
 Michael Woodward, Heidelberg - Australia
 Kazuo Kishi, Tokyo - Japan

PRELIMINARY PROGRAM

Tuesday, August 25th, 2009

14:00-18:00
 Registration
 18:00-19:30

Opening Ceremony and Honorary Guest Lecture
 Welcome reception

Wednesday, August 26th, 2009

9:00-10:30
 Plenary Session
 11:00-12:30
 Parallel Sessions
 14:30-18:00

Poster and Parallel Sessions
 Concert and Wine and Cheese Cocktail

Thursday, August 27th, 2009

9:00-10:30
 Plenary Session
 11:00-12:30
 Parallel Sessions
 14:30-18:00

Poster and Parallel Sessions
 Gala Dinner

Friday, August 28th, 2009

9:00-10:30
 Plenary Session
 11:00-12:30
 Parallel Sessions

Excursion Tour and Free Evening

Saturday, August 29th, 2009

9:00-10:30
 Plenary Session
 11:00-12:30
 Parallel Sessions
 14:30-15:30
 Plenary Session
 15:30-16:00

Awards and Closing Remarks

October 2008

Second announcement and Call for abstracts

March 1st, 2009

Abstract deadline Accepted abstracts will be published in
 Wound Repair and Regeneration

Please, return reply card to receive further informations and registration form.

TECHNICAL ORGANIZATION AND REGISTRATION

OBJECTIF Congrès
 1, place de la Liberté

33130 Bègles Bordeaux, France

Phone: (33) 556 49 00 33 Fax: (33) 556 85 24 46

www.objectif-congres.com

E-mail: contact@objectif-congres.com

AWTRS Executive Officers and Committee Members 2009

President: Assoc/Prof Allison Cowin
 Head, Wound Healing Laboratory
 Women's and Children's Health Research
 Institute
 Phone + 61 8 8161 7077
 Fax + 61 8 8239 0267
 Email: allison.cowin@adelaide.edu.au

Vice President: Prof Zee Upton
 Program Leader-Tissue Repair and Regeneration
 Institute of Health and Biomedical Innovation
 Queensland University of Technology,
 Phone: +61 7 3138 6185
 Fax: +61 7 3138 6030
 E-mail: z.upton@qut.edu.au

Treasurer: Dr Tim Rayner
 Principal Research Scientist
 TGR BioScience Pty Ltd
 Phone: + 61 8 8354 6179
 Fax: + 61 8 8354 6188
 Email: tim.rayner@tgr-biosciences.com.au

Secretary/Membership: Dr Rachael Murray
 NHMRC RD Wright Fellow,
 CHBRI Wound Healing Laboratory,
 The Children's Hospital at Westmead,
 Research Building,
 Locked Bag 4001,
 Westmead, Sydney NSW 2145
 Phone + 61 2 98453101
 Fax: + 61 2 98451317
 Email: RachaelM@chw.edu.au

Dr Pritinder Kaur
 Epithelial Stem Cell Biology Laboratory
 Peter MacCallum Cancer Centre
 Phone + 61 3 9656 3714
 Fax + 61 3 9656 3738
 Email: pritinder.kaur@petermac.org

Editor: Assoc/Prof Ian A. Darby
 Head, Cancer & Wound Healing
 School of Medical Sciences
 RMIT University
 PO Box 71, Bundoora, Victoria 3083
 Tel: +61 3 9925 7624
 Fax: +61 3 9925 7063
 E-mail: ian.darby@rmit.edu.au

Assoc/Prof Joe Rothnagel
 School of Molecular and Microbial
 Sciences
 The University of Queensland,
 St Lucia, Qld, 4072
 Phone: +61 7 3365 4629
 Fax: +61 7 3365 4699
 Email: j.rothnagel@uq.edu.au

Dr Hilary Wallace
 Research Fellow
 School of Surgery & Pathology
 University of Western Australia
 Phone: + 61 8 9431 2690
 Fax: + 61 8 9431 2623
 Email: hilary.wallace@uwa.edu.au

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@vcp.monash.edu.au

Assoc/Prof Laura Poole-Warren
 Associate Dean (Research Planning and
 Strategy)
 Biomaterials and Tissue Engineering
 The University of New South Wales
 Phone: +61 2 9385 3905
 Fax: +61 2 9663 2108
 Email: l.poolewarren@unsw.edu.au

Dr Mark Fear
 Experimental and Regenerative Neurosci-
 ences (EaRN)
 M317
 University of Western Australia
 Crawley WA 6009
 Phone: +61 8 6488 7514
 Email: mark@mccomb.org.au

Prof Nick Santamaria
 Chair of Acute & Ambulatory Care
 School of Nursing and Midwifery
 Curtin University of Technology
 Ph +61 8 9266 2116
 Fax +61 8 9266 2959
 Email: N.Santamaria@curtin.edu.au

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Australasian Wound & Tissue Repair Society 2009 Membership

1 YEAR membership

Ordinary Annual Membership \$50

Student Annual Membership \$25

Corporate Membership \$350

NEW 3 YEAR membership option

Ordinary Annual Membership 3 years \$140

Student Annual Membership 3 years \$70

MEMBERS' BENEFITS INCLUDE:

AW&TRS Quarterly 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 & 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: subscribe to Wound Repair and Regeneration for just 76 GBP.

The chance to add you Research Profile with a brief description of your research and a web link to the AW&TRS web site – AW&TRS members can add a brief researchers profile and web link to AW&TRS web site, which means not only will other researchers be able to see what you do but you can look for specialists to collaborate with in the area you are interested.

Advanced notification of the AW&TRS biennial meeting as well as focus meetings.

Significant discounts on registration rates for the AW&TRS conferences – members are entitled to a discount from the regular registration rate.

Travel Awards for young AW&TR investigators at AW&TRS biennial meetings – details of these travel awards will posted on the web site prior to meetings.

Young Investigator Awards at AW&TRS biennial meeting – details of these awards will posted on the web site prior to meetings.

To join as a **NEW** member or **RENEW** your membership for

2009 go to www.awtrs.org and

click on the membership link