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Linking the International Community of TERMIS

winter '06 *Volume i, Issue i*

Contents:

Edited and Compiled by :

Dietmar W. Hutmacher, PhD, MBA
University of Singapore

Sarah Wilburn
TERMIS Administrator

Dear Friends and Colleagues,

Welcome to the first issue of the TERMIS newsletter! 2005 was a very fascinating year for our organizations. The Boards of the TESI, ETES and Asian Societies have joined together to truly form one international organization. My appreciation extends to everyone who has supported and dedicated so much time and energy in the formation of TERMIS. It is wonderful to see the international community of tissue engineers and regenerative medicine scientists come together for one goal: to find cures and new technologies that will ultimately affect our patients.

I would like to congratulate Dr. Yilin Cao and Dr. Wei Liu and all the organizing committee members for hosting the very successful meeting in Shanghai. To organize a meeting of that magnitude takes a lot of time and energy and we thank our Chinese colleagues for welcoming us to their country.

To continue the communication and interaction amongst our colleagues, we invite you to join us at the Regenerate World Congress from April 24-27, 2006 in Pittsburgh, Pennsylvania. The World Congress will be co-located with the Society for Biomaterials Annual meeting, April 26-29, 2006. We are anticipating over 2,000 tissue engineers and regenerative medicine clinicians, scientists, researchers and students to attend. The TERMIS-EU will be hosting an annual meeting in Rotterdam, The Netherlands from October 8-11, 2006.

As you are aware, TERMIS is composed of three Continental Chapters: Asia-Pacific, Europe and North America. These Chapters have been formed to maximize the communication and education of tissue engineering and regenerative medicine research regionally. We hope that this new structure will continue the promotion, participation and provide a voice to our member's research amongst the regions.

As Co-Chairs of the international registry on patient trials and products, Dr. Joseph Vacanti and Dr. David Williams are working together to form a registry committee and determine a proposed plan for the formation of the registry. This is a very exciting endeavor and we look forward to its inception.

The students would also like their voice to be heard. In Shanghai, a group of students came together to begin the formation of a Student and Young Investigator Section (TERMIS – SYIS). At the World Congress Meeting, TERMIS-SYIS will be hosting a student meet and greet, a student-mentor round table, a professional development presentation skills workshop, and a social activity. We encourage all students to participate in these events and to become an active member in the TERMIS-SYIS.

As an international Society, we need to continue to work together to coordinate and communicate in both an international and regional level. Please take a moment to inform your colleagues about TERMIS and help to continue to grow the Society.

We look forward to seeing everyone at the Regenerate World Congress Meeting in April! Please do not hesitate to contact Sarah Wilburn at swilburn@termis.org if you have any questions.

Regards,
Alan J. Russell, PhD
President of TERMIS

From the Editor

Welcome to the first issue of the TERMIS Newsletter! We invite you not only to read the first issue but also to contribute in the future on relevant information or research that may interest all members of the Society.

The vision of the editorial board of the TERMIS Newsletter is to provide a forum to address the important topics, news, issues, meetings, etc. and delivering this essential information in concise, clear and attractive formats - vital to an increasingly time-constrained community. Also, the TERMIS Newsletter is aimed at helping create the positive environment required to attract and retain tissue engineering & regenerative medicine stakeholders including the wider scientific, clinical, engineering, commercial and regulatory community. Each issue of the TERMIS newsletter will feature an article on a leading research group from within the three TERMIS Chapters.

We would like to remind you that the TERMIS logo competition is underway. All members are invited to submit their designs to either Dietmar W. Hutmacher, PhD, MBA or Sarah Wilburn by March 31, 2006.

If you would like to contribute to the TERMIS quarterly newsletter, please contact Dietmar W. Hutmacher, PhD, MBA at biedwh@nus.edu.sg, Sarah Wilburn at swilburn@termis.org or the editorial board members of the different chapters:
AP: Gilson Khang gskhang@chonbuk.ac.kr,
EU: Aldo Boccaccinni a.boccaccini@imperial.ac.uk,
NA: Steven Goldstein stevegld@umich.edu

We look forward to hearing from you!

NEWS from TERMIS-AP Chapter

Foundation of TERMIS-AP Chapter:

In July 2005, the TERMIS-AP Chapter was established at the Catholic University of Korea, Medical School, Seoul. Representatives from countries with the Asian-Pacific region invited to attend were:

Prof. Teruo Okano (Japan)
Asst. Prof. Jan-Thorsten Schantz (Singapore)
Prof. Gin-Ho Hsiue (Chinese, Tapei)
Prof. Ahnond Buynyaratvej (Thailand)
Prof. Geoff MeKeller (Australia)
Prof. Ruszymah Bt Hj Idrus (Malaysia)
Prof. Yilin Cao and Wei Liu (China)
Prof. Minoru Ueda (Former President of ATES)
Prof. Allan J. Russell (President of TERMIS)
Prof. Jöns Hilborn (President-Elect of TERMIS).

Council Members of the TERMIS-AP Chapter:

Prof. Hai Bang Lee was elected as the Continental Council Chair of the TERMIS-AP Chapter in October 2005. The nineteen Council Members of the TERMIS-AP Chapter include the following:

Prof. Toshihiro Akaike	takaike@bio.titech.ac.jp
Prof. Yilin Cao	yilincao@yahoo.com
Prof. Ahnond Buynyaratvej	ahnond@nrct.go.th
Assoc. Prof. Dietmar Hutmacher	biedwh@nus.edu.sg
Prof. Ruszymah Idrus	ruszy@medic.ukm.my
Prof. Ging-Ho Hsiue	ghhsiue@che.nthu.edu.tw
Prof. Gilson Khang	gskhang@chonbuk.ac.kr
Prof. Hai Bang Lee	hblee@krict.re.kr
Prof. Il-woo Lee	leeilwoo@catholic.ac.kr
Prof. Wei Liu	liuwei_2000@yahoo.com
Prof. Geoff McKellar	geoffmck@optusnet.com.au
Prof. Shin Yong Moon	shmoon@snu.ac.kr
Prof. Teruo Okano	tokano@abmes.twmu.ac.jp
Prof. Chandra P. Sharma	sharmacp@sctimst.ker.nic.in
Prof. Yasuhiko Tabata	yasuhiko@frontier.kyoto-u.ac.jp
Prof. Minoru Ueda	mueda@med.nagoya-u.ac.jp
Prof. Shen-guo Wang	wangsg@hotmail.com
Prof. Masayuki Yamato	myamato@abmes.twmu.ac.jp
Prof. Xingdong Zhang	zhangxd@scu.edu.cn

Prof. Gilson Khang has been appointed as the TERMIS-AP Treasurer, website coordinator for the Asian-Pacific section of the TERMIS website, and the newsletter coordinator for the Asian-Pacific section of the TERMIS newsletter.

Upcoming Events

Academic Conferences for the Asian-Pacific Region in 2006:

The 5th Annual Congress of the Japanese Society for Regenerative Medicine

March 8 ~9, 2006, Okayama, Japan
President: Professor Noriaki Tanaka
E-mail: jstrm2006@md.okayama-u.ac.jp
Abstract submission: February 1 ~March 15, 2006

Japanese Society of Inflammation and Regeneration 27th Annual Meeting

July 11 ~12, Tokyo, Japan
President: Professor Shinichi Kawai
E-mail: jsir2006@med.toho-u.ac.jp

Japanese Society for Tissue Engineering 9th Annual Meeting

Sept 7 ~ 8, 2006, Kyoto, Japan
President: Professor Yasuhiko Tabata
E-mail:jste9@pac.ne.jp

Korea Tissue Engineering and Regenerative Medicine Society (KTERMS) 8th Annual Meeting

June 2, 2006, Samsung Seoul Hospital, Seoul, Korea
President: Professor Jung Man Kim MD, PhD
E-mail: gskhang@krict.re.kr, www.kterms.or.kr

World Congress on Medical Physics and Biomedical Engineering (WC 2006 Seoul)

Aug 27 ~ Sept , 2006, Coex Convention Center, Seoul, Korea
President: Professor Sunil Kim PhD
E-mail: wc2006@koconex.com, www.wc2006-seoul.org

TERMIS-AP Chapter Meetings:

2007 : Tokyo, Japan. Meeting Chair: Teruo Okano. Late September or Early October.

2008 : Interested countries Australia, Singapore and Chinese, Taipei.

From ETES to TERMIS-EU: Plans and Activities for Next Year

Since the early stages of the creation of the European Tissue Engineering Society (ETES), it was clear that there was „a strong need for a worldwide coordination between all Tissue Engineers and between all Tissue Engineering Societies“ (R. Cancedda, ETES Newsletter, March 2001). We are now happy to acknowledge that thanks to the coordinated efforts of many people, a worldwide society (TERMIS) has been created and the former ETES has been restructured as the European Chapter of the new society (TERMIS-EU).

Being part of a worldwide society, and still being able to independently coordinate local initiatives, is expected to bring tangible benefits to the european community of tissue engineers. Following are the most relevant activities among those planned for the next year:

Setting up of centralized support to facilitate the organization of annual meetings (e.g., in defining format of the meeting, attracting sponsors)

Coordination of a local “Student and young investigator section” to advance participation of junior tissue engineers in the field (e.g., by providing a centralized database of students seeking research opportunities and by organizing regional student activities)

Organization of the structure for a regional International Registry for patient trials and products, in close cooperation with the worldwide TERMIS initiative

Contribution to the definition of European regulations on advanced therapy products by representing the scientific and industrial tissue engineering community

Assembly of a database of european tissue engineers, divided in appropriate categories and according to research interests

Beyond the specific aims, the overall goal of TERMIS-EU is thus to provide an effective cohesion among members active in different disciplines, by facilitating exchange of information and by promoting interactions between industry, university and the EU commission/regulatory bodies. The specific regional interests and needs will be then represented within TERMIS, in the challenging attempt to undertake worldwide initiatives toward the common interest of a scientific and clinical advance of the field of Tissue Engineering/Regenerative Medicine.

I would like to take this opportunity to encourage you to write if you would like to propose specific initiatives or if you feel things could be managed in a different way: TERMIS-EU, as any society, may effectively function only if it represents the interests of the members, and if members bring an active contribution.

On behalf of the TERMIS-EU Council, I wish you a successful year!

Ivan Martin
European Continental Chair

TERMIS-NA Anthony Atala, M.D., Continental Chair

The Tissue Engineering and Regenerative Medicine International Society-North America (TERMIS-NA) is off to a good start. The first official board meeting of the society occurred during the Tissue Engineering Society International meeting in Shanghai, P. R. China in October of this past year. The meeting was extremely successful. It also served as a springboard for our new society. An excellent group of dedicated individuals are involved in the Charter organization of the North America Chapter. The other current council members include Antonios Mikos as the Continental Chair Elect, Stephen Badylak as the Member-At-Large, and the following Council Members: Kristi Anseth, Tim Bertram, Barbara Boyan, Patrick Cantini, Ann Gleeson, Steven Goldstein, Clemente Ibarra, David Mooney, Robert Nerem, Laura Niklason, Buddy Ratner, Bill Tawill, Charles Vacanti, Mark Van Dyke, William Wagner and Kim Woodhouse. We are pleased to have such a distinguished group of scientists and regenerative medicine advocates involved with the society.

The Chapter has already been hard at work in establishing the new projects for the coming years. This year’s TERMIS-NA meeting will be held in conjunction with the Society for Biomaterials Congress in April. The 2007 TERMIS-North America Chapter meeting will be held in Toronto, and the Chair of the Host Committee is Molly Shoichet. Molly Shoichet is already assembling a committee to start preparing the meeting for 2007. Tim Bertram has kindly agreed to serve as the coordinator for interactions with industry. The North America representative for the newly formed Student and Young Investigator Section (SYIS) is Tiffany Sellaro. The council member that will assist with the student chapter will be Kim Woodhouse. In addition, our organization will be participating actively in the TERMIS international website and Bill Tawil has agreed to serve in that capacity for the North America Council. Steven Goldstein has agreed to assist with the newsletter and Mark Van Dyke to serve as Treasurer.

At the time of this newsletter, we are also preparing to announce the site for the 2008 meeting. The meeting will be held in early December, and the city and dates will be finalized soon. Please join me in welcoming all the new members of the North America Council, and I would like to thank our membership for their support in the society.

If you haven’t seen Pittsburgh lately, you haven’t seen Pittsburgh. Once the industrial hub for steel, iron and glass production, Pittsburgh is now a center for technology, robotics, medicine and tourism. The city is known for its vibrant cultural scene, its architecture and its neighborhood charm, as well as more than $2 billion in new developments. Pittsburgh today boasts one of the world’s most spectacular urban landscapes where rugged hillsides shelter a new wave of high-tech and service industries along with pioneering health systems and universities.

In April, Pittsburgh will serve as the back drop to two of the biotechnology’s industry’s most respected conferences – The Regenerate World Congress and the Society for Biomaterials Annual Meeting. Being held concurrently, these two conferences will bring together an international community of 2000 scientists, clinicians, students, business leaders, entrepreneurs, and representatives of government funding agencies engaged or interested in the fields cellular therapies, medical devices and artificial organs, biomaterials, bio

TERMIS-NA *continued*

engineering and clinical translation. This collaboration will enable a dynamic event, tapping cross-organization talent, and offering attendees an opportunity to discuss their research and clinical successes with a broader audience.

The goal of this unique gathering is to advance tissue engineering/ regenerative medicine technology and foster interactions that may more rapidly result in new technologies that will benefit patients worldwide.

For more information about the Regenerate World Congress please visit www.regenerate-online.com.

SYIS
TERMIS-Student and Young Investigator Section

The 8th TESI Annual Meeting at Shanghai, P.R. China presented a unique opportunity for student and post-doctoral researchers in Tissue Engineering and Regenerative Medicine to organize themselves as a part of TERMIS (www.termis.org). After several brainstorming sessions in Shanghai followed by email exchanges between the founding members, the 'Student and Young Investigator Section' of TERMIS was conceived with the purpose of furthering the aims and objectives of TERMIS as they relate to student research and education. TERMIS-SYIS aims to serve as a common platform to generate interest and promote interaction among undergraduate and graduate students, post-doctoral researchers and young investigators in industry and academia related to tissue engineering and regenerative medicine. SYIS will also provide professional and career development opportunities. Examples of these opportunities at the upcoming Regenerate World Congress include professional development workshops and round table discussions with some of the leaders in tissue engineering and regenerative medicine. Also, members will have access to research and job opportunities worldwide, receive the TERMIS newsletter and will have exclusive access to the forums and discussion boards in the upcoming TERMIS-SYIS website.

The TERMIS-SYIS will closely follow the organizational and the working pattern of TERMIS and will be formally launched in April'06 at the World Congress in Pittsburgh, where several activities are being planned exclusively for SYIS members. Membership to TERMIS will be included with the registration for the upcoming World Congress. If you are unable to attend the meeting and would like to become a member, please complete the online membership form located at www.termis.org. For queries relating to membership, interested persons should contact the student representative for SYIS, who have been appointed by their respective TERMIS Continental Councils:

Asia-Pacific:

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Statements from TERMIS Members

With the formation of the TERMIS, we asked members from around the world to provide their reactions to the recent merger of the global organizations to form one international Society.

Prof. Dr. Ralf Huss- Congress Chairman 4th ETES conference 2005
Roche Diagnostics GmbH, Penzberg, Germany

„The recent merger of TESI, ETES and the Asian societies to one international society representing globally the field of TISSUE ENGINEERING and related disciplines was well received during the 2005 meeting of ETES in Munich. It is of pivotal importance to effectively represent a strong and globally influencal society spreading modern science and state-of-the-art technologies."

Prof. Zee Upton, PhD – Queensland University of Technology
Queensland, Australia

"The formation of a single international, professional, scientific organization in Tissue Engineering and Regenerative Medicine is a progressive step in the evolution and wider recognition of the disciplines. It reaffirms the international, multicultural, multidisciplinary and growing importance of Tissue Regeneration. The formation of TERMIS is significant for Australian researchers. No longer will we be required to decide which of the multiple scientific meetings to attend. TERMIS provides the opportunity to communicate and network with like-minded biomedical scientists through one premier international meeting, thus overcoming the tyranny of distance. This is an opportunity for Australasian scientists to contribute and participate in the rapid advances occurring in this exciting, rapidly developing, interdisciplinary field."

Prof. Stephen E. Feinberg, DDS, MS, PhD
University of Michigan Health System, USA

"The area of tissue engineering or regenerative medicine is becoming more complex. There is now a need to replace the largely empirical approaches by mechanistic ones but this will require input from multiple disciplines in non-traditional areas with our own basic researchers, engineers and clinicians. It is only through these collaborative interdisciplinary efforts will we be able to bring this technology forward into the clinical arena. The merger of TESI, ETES and the Asian Societies to create one international Society- TERMIS is a major step forward in enabling scientists from around the world to develop these necessary interactive and collaborative efforts. The formation of TERMIS will be a major catalyst to encourage these interactions by serving as a forum to allow individuals from around the world to communicate with others who have similar and synergistic interests through a common administrative structure."

Statements from TERMIS Members *continued*

Dr. Simon Cool, PhD – Institute of Molecular and Cell Biology, Singapore

"Often merging societies is fraught with danger, with the less popular societies becoming overshadowed. However in this instance I feel it both necessary and appropriate to merge TESI, ETES and the Asian Societies to create one international Society - TERMIS. These societies have similar goals and objectives and in unity come added strength."

Ulrich Nöth, MD - Vice President Würzburger Initiative Tissue Engineering e.V. (WITE e. V) TERMIS-EU Council Member and Treasurer, Germany

"The merger of the world's most important tissue engineering societies to the TERMIS is a great chance to establish a real international society and bring researchers and clinicians from the US, Europe and Asia closer together. Special thanks go to the people who initiated and completed the merger."

Dr. Eiji Kobayashi, MD, PhD - Jichi Medical School

"Congratulations on the recent merger of the TESI, ETES and the Asian Societies. Let us share the experiences on world class scientific research using our multidisciplinary skills for development of research programs towards innovative medicine."

QUT Seeks to Heal Wounds Without Scars

David Leavesley, Sean McElwain, Graeme George, Zee Upton

Tissue Repair and Regeneration Program
Science Research Centre
Queensland University of Technology

2 George Street, Brisbane, Queensland, 4000, AUSTRALIA.
Correspondence: z.upton@qut.edu.au

Treatment of wounds represents a significant challenge at all levels of our society, in terms of cost (physical, emotional and financial) to patients, the economy and to the wider Australian and global communities. Despite this, relatively little research is directed at this hidden health problem. The Tissue Repair & Regeneration team at QUT is addressing this challenge using advanced biotechnological, biomaterials and bioengineering strategies. Our interdisciplinary team is focussed on delivering practical innovations in wound healing, with an emphasis on diabetic and venous ulcers, as well as burns. This 'snapshot' of our research briefly describes some of the research projects we are pursuing at QUT: interactions of growth factors with other components of the extracellular milieu in tissues; cellular mechanisms associated with wound healing and scar remediation; diagnostic and prognostic markers of healing; novel, relevant, ex vivo porcine wound healing models, as well as 3D skin equivalents for pre-clinical evaluation of new wound therapeutics; and the design and production of "smart" bioactive wound dressings. The overall goal of our research is to generate new technologies and wound management interventions that keep patients healthy and obviate their need to depend upon the cost-intensive hospital-based health care sector.

Structural and Functional Investigation of Growth Factor- and Vitronectin-binding Receptor Cooperation in Modifying Cellular Function

We have previously reported that growth factors interact with the extracellular matrix glycoprotein, vitronectin. Further, complexes of growth factors with vitronectin (generically referred to as VitroGro®) result in enhanced cell proliferation and migration leading us to evaluate this technology for: serum-free cell and tissue culture; surface coating of implanted prostheses; and other tissue repair and regeneration applications. Using microarray and proteomic approaches we are also probing the fundamental mechanistic elements behind why presentation of growth factors bound to ECM proteins, such as vitronectin, enhances cell proliferation and migration. In addition we are currently completing pre-clinical in vivo evaluations of these complexes as a topical therapy for deep partial thickness burns and for diabetic ulcers. We want to understand how skin cells respond to the complexes in the conditions found in the in vivo diabetic wound environment: namely in the presence of wound exudates, high concentrations of insulin and glucose, and low oxygen.

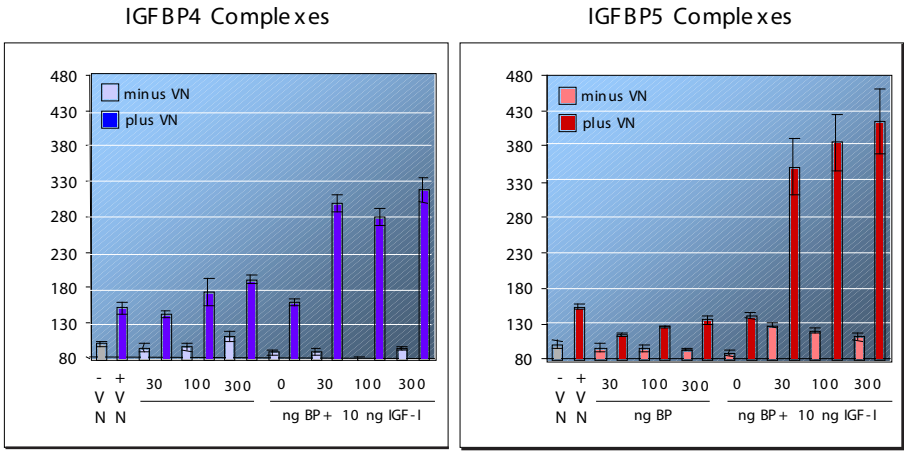

Fig 1. VitroGro® stimulates the migration of keratinocytes.

Migration of keratinocytes were assayed with, or without, vitronectin in serum-free basal media in Transwells™. Maximal migration is observed only when all three components of the complex are presented together to cells.
(Image courtesy of Caroline Hyde)

QUT Seeks to Heal Wounds Without Scars *continued*

Identifying the Relationship Between Biochemical Markers and Wound Healing in Chronic Venous Leg Ulcers Treated with Compression Therapy

In allied projects we are also investigating the relationship between biochemical markers in wound fluid and wound healing in chronic venous leg ulcers treated with compression therapy. Again, the application of advanced proteomic techniques are being applied to analyse biochemical markers in sequential wound fluid samples collected from patients during the course of compression therapy. The aim of this project is to identify fluid and/or tissue indicators associated with improved or delayed healing. The identification of biochemical changes indicative of healing at various time points will provide basic information about the complex and changing wound environment and contribute to the development of models to predict healing in individuals, as well as facilitate the development of new therapies and clinical management approaches.

Elucidating Mechanisms Underlying the Effective Use of Hyperbaric Oxygen as a Therapy for Wound Healing

Related to the previous project, we are also characterising the dynamic changes in wound fluid and repairing tissue during, and following, hyperbaric oxygen treatment of chronic ulcers and non-healing wounds. These data will provide a novel window into the biochemical and cellular changes associated with the anecdotal benefits of hyperbaric oxygen therapy, and ultimately, may enable us to mimic the effects of this therapy using lest costly approaches.

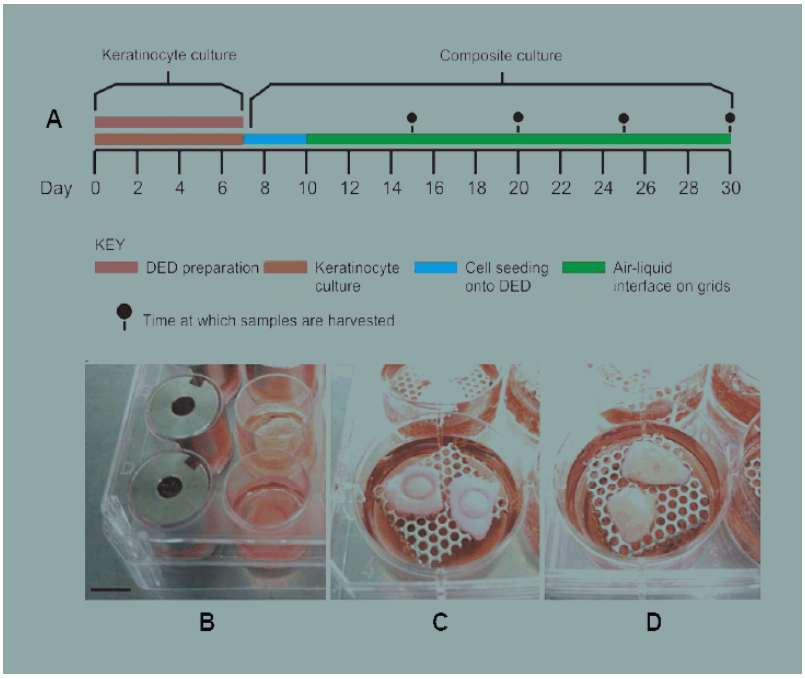

Fig 2. Human skin equivalent construct for in vitro skin repair and regeneration studies.

A. Timeline of the model construction.

B. Steel rings are used to seed keratinocytes on top of the centre of the de-epithialised dermis (DED) in a 24-well culture dish. Scale bar: 5 mm.

C. Grids are used to bring the HSE to the air-liquid interface after the rings are removed.

D. Model after 10 days culture at the air-liquid interface.

Method adapted from that previously reported by Huang et al., Wound Repair Regen 2004, 12:276-287.
(Image courtesy of Gemma Topping)

In Vitro Evaluation of the Potential of Novel Silicones for Scar Remediation.

In addition to the pressing need to dissect the cellular aspects of wound healing, there is a parallel need to understand the processes that underlie scarring. Silicone gel sheets are known to reduce the size and severity of scars that result from burns by an unknown mechanism. We believe that the decrease in scar tissue is due to the egress of specific silicone species from the sheet into the healing tissue. These silicones interact with fibroblasts present during granulation tissue remodelling and possibly modify the production of collagens. This project has identified novel characteristics of some silicones that penetrate the skin and is examining the effect of these novel silicone species on the synthesis and organisation of collagen by fibroblasts derived from normal, keloid and hypertrophic scars. In collaboration with chemists and biomaterials scientists we plan to exploit these silicones as an effective scar remediation therapy. This project is also providing an opportunity to explore how nanoscale structures, such as these silicones, can impact on cellular processes.

Bioactive Polymers for Wound Healing Applications

Another major aim of the QUT Tissue Repair and Regeneration team is to develop novel bioactive polymeric dressings for application in wound healing. One strategy is focused on releasing bioactive agents from provisional carriers (eg. biodegradable polymers) using cell-activated linkers such as protease sensitive cleavage sites. Our second strategy is the development of two distinct polymeric delivery systems in a multicomponent bandage. One component will release cell-stimulatory agents and/or adjuvants as the other component, a responsive hydrogel, is designed to passivate wound exudates which otherwise may reduce the activity of the wound healing agents.

TERMIS Logo Competition

The TERMIS logo competition is underway. Do you have a creative idea for the new TERMIS logo? The Society needs your help and creativity to design the TERMIS logo. If you are interested in participating, please submit your designs to Sarah Wilburn via email at swilburn@termis.org. With the submission, include a short description of how the logo was created and what the logo conveys for the Society.

The deadline for submissions is March 31, 2006.

All logo designs submitted, including the short descriptions, will be posted on the TERMIS website, www.termis.org, for two weeks. Each member of TERMIS will have an opportunity to vote for their favorite logo. The winners will be announced during the Regenerate World Congress Meeting in April.

We will award prizes to the first, second and third place winners.

1. First prize for logo design US$ 300 & free registration and the Regenerate Meeting in April 2006.

2. Second prize for logo design US$ 200 & free registration and the Regenerate Meeting in April 2006.

3. Third prize for logo design US$ 100 & free registration and the Regenerate Meeting in April 2006.

We encourage all members to participate in the logo design competition. If you have any questions, please contact:

Dietmar W. Hutmacher, PhD, MBA biedwh@nus.edu.sg
Sarah Wilburn swilburn@termis.org.

Upcoming Meetings

April 2006

Society for Biomaterials 2006 Annual Meeting and Exposition
April 26-29, 2006 in Pittsburgh, Pennsylvania. The deadline for abstracts is November 1, 2005. Visit their website for further details.

August 2006

Advances in Tissue Engineering 14th Annual Short Course
August 16-19, 2006, Rice University, Houston, Texas, USA

May 2006

University of Minnesota Short Course
Short Course on the Preservation of Cells, Tissues, and Gametes - May 15-17, 2006 at the University of Minnesota

Strategies in Tissue Engineering
2nd International Conference on Strategies in Tissue Engineering will be held May 31 through June 2, 2006 in Wurzburg, Germany. TERMIS members received a reduced registration rate - 170 euros for early registration; 220 euros for late registration.

May 2008

8th World Biomaterials Congress
May 28 through June 1 in Amsterdam, The Netherlands. Please contact info.wbc2008@ics-online.nl for further details.

International Registry of Regenerative Medicine Patient Trials and Products

The TERMIS Governing Board and Continental Chapter Councils have approved the creation of the international registry of regenerative medicine patient trials and products. Dr. Joseph Vacanti and Dr. David Williams have been appointed as Co-Chairs of this important task. Both are currently working together to form an International Registry Committee to assist them in creating a project plan. As the plans evolve, they will be posted on the TERMIS website.

TERMIS Meetings

April 2006

Regenerate 2006

REGENERATE World Congress on Tissue Engineering and Regenerative Medicine will be held in Pittsburgh, Pennsylvania, from April 24-27, 2006 at the Westin Convention Center Hotel Pittsburgh. The Regenerate World Congress Meeting will be co-located with the Society of Biomaterials Meeting.

October 2006

Rotterdam, the Netherlands
October 8-11 Meeting Chair Gerjo van Osch. Congress Center De Doelen. The submission of abstracts will begin in February 2006.

Mark Your Calendars - Upcoming TERMIS Meetings
Visit the TERMIS website for updated details.

June 2007

Toronto, Ontario, Canada
Meeting Chair: Molly Shoichet. June 13-16, 2007 at the Westin Harbour Castle in Toronto, Ontario, Canada.

September 2007

Tokyo, Japan
Late September or Early October, Meeting Chair: Teruo Okano

London, England
Meeting Chair: Robert Brown. September 5-8, 2007. London, England, United Kingdom

June 2008

Porto, Portugal
Meeting Chair: Rui Reis. June 2008. Meeting dates to be determined.

December 2008

San Diego, USA
Meeting Chair: Bill Tawil. December 6-10, 2008. San Diego Marriott Hotel & Marina, San Diego, California, USA

October 2009

World Congress
Meeting Chair: Dr. Shin-Yong Moon. October 12-16. Seoul, Korea

REGENERATE World Congress on Tissue Engineering and Regenerative Medicine

We invite you to participate in the Regenerate World Congress that will be held in Pittsburgh, Pennsylvania from April 24-27, 2006. This year the Regenerate World Congress will be co-located with the annual Society for Biomaterials Meeting, bringing nearly 2,000 researchers, clinicians and students from around the world together in one location. We have received over 500 abstracts on various tissue engineering and regenerative medicine topics making this year's meeting a must-attend event.

To register online today, please click here. Registrations are also being accepted by fax, please print out and complete the registration form (PDF 116K) and fax to 412.235.5120.

To obtain more information on the combined discounted Regenerate/SFB registration fees, please contact PTEI at 412-235-5116.

We look forward to seeing you in Pittsburgh! Take a moment to register today at www.regenerate-online.com.

Program Update

Keynote Presenters
Two Keynote Presentations are confirmed for the event. They include:

Opening Keynote – Tuesday, 8:00 am
Gregory Stock – Director of the Program on Medicine, Technology, and Society, UCLA School of Medicine

Regenerate/SFB Keynote – Wednesday, 6:00 pm
James Collins - Center for BioDynamics and the Department of Biomedical Engineering at Boston University

International Student Travel Awards
Sponsored by PTEI

TERMIS North America is pleased to announce the Pittsburgh Tissue Engineering Initiative International Student Travel Award program for the 2006 Regenerate World Congress on Tissue Engineering and Regenerative Medicine. Graduate and Post Doctoral students who have submitted and been accepted to present either an oral or poster presentation at the conference are eligible for the award. Awards are being given to students who reside outside the United States to help offset the cost of travel to/from the conference in Pittsburgh. All students interested must meet the eligibility requirements listed on the web site and must submit their documentation by March 1, 2006. The awards will be given on a first come, first serve basis. More information can be found at www.regenerate-online.com.

Updated Exhibitors List

BioE, Inc.
Cambrex Corporation
EnduraTEC Systems Group
GTEC
IOP Publishing
LifeCorr Biomedical
Mary Ann Liebert, Inc. Publishers
National Regenerative Medicine Foundation
NIBIB/NIH
NovaMatrix
PTEI
Rheogene, Inc.
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Student Activities

Undergraduate, graduate and post-doctoral students are invited to participate in several exclusive activities including:

Student Meet and Greet

(open for all undergraduate, graduates and post-doc students)
Take advantage of this opportunity to meet and network with students and young investigators from around the world who are attending the World Congress. If you are a visiting scientist, please pick up your Pittsburgh Welcome packet at this time. The Tissue Engineering and Regenerative Medicine-Student and Young Investigator Section (TERMIS-SYIS) is proud to sponsor this event. Complimentary beer, wine and appetizers will be served.

Student Meet Mentor

(for all undergraduate, graduate and post-doc students)
The Tissue Engineering and Regenerative Medicine International Society -Student and Young Investigator Section invite you to attend a Student-Mentor happy hour round table discussion. During this event, students will have the opportunity to have an open discussion with leaders in tissue engineering and regenerative medicine from academia and industry. Pre-registration is required for this event. Details are forthcoming.

Professional Development Presentation Skills workshop

(TERMIS student/post doc members only)
The Tissue Engineering and Regenerative Medicine International Society -Student and Young Investigator Section is sponsoring a professional development workshop that focuses on formulating and giving a scientific presentation in an international forum. Pre-registration is required and details are forthcoming.

Social Night – Hard Rock Café Pittsburgh

(for all undergraduates, graduates and post-doc students)
TERMIS-SYIS invites you to join them at the Hard Rock Café, located in Station Square, for buffet, drinks and live music! This is a great opportunity for students to let loose and network in a casual atmosphere. Following the Hard Rock, enjoy the nightlife of Station Square. Total cost for each student TBD, which will include food, entertainment, and transportation.

2006 TERMIS-EU Annual Meeting

The TERMIS-EU will host their annual meeting in Rotterdam, The Netherlands from October 8-11, 2006 at the Congress Center De Doelen. The scientific program will include sessions on stem cells and tissue engineering, cells and biomaterials, and includes symposiums organized by the European Society for Biomechanics, the Spanish Society of Histology and Tissue Engineering, European Society for Biomaterials, European Tissue Repair Society, International Cartilage Repair Society, and the European Society for Artificial Organs.

Call for Abstracts

Mid February 2006, abstracts can be submitted electronically through the conference website, www.etes2006.org. The deadline for abstract submissions is May 1, 2006.
Abstracts can be submitted for consideration for both oral and poster presentations in each of the following topics:

- Bioreactors and Physical Factors
- Cartilage, ligament, tendon
- Bone
- Central & peripheral nerve tissue
- Kidney, liver, pancreas, artif endocrinol organs
- Cardiovascular
- Oral, facial, airway tissues
- Skin
- Synthetic biomaterials
- Natural biomaterials
- Growth factors
- Gene therapy
- Cell therapy
- Stem cells
- ICRS symposium “The ideal cell for cartilage tissue engineering” *
- ESBiomaterials symposium “Novel approaches in the material sciences” *
- ESBiomechanics sympsium “Mechanobiology of tissue engineering” *
- ETRS symposium “Tissue engineered products applicable in wound healing” *
- SEHIT symposium “Cell viability in tissue engineering” *
- Miscellaneous

Please note:

- Abstracts can be submitted electronically only via the website www.etes2006.org
- Abstracts received by fax or in writing will not be accepted.
- The abstract should be submitted in English.
- Abstracts are peer reviewed by a panel of experts.
- An abstract may be selected for oral or poster presentation or it may be rejected.
- Confirmation of acceptance or rejection by the Scientific Committee will be given before June 30, 2006 and mailed to the corresponding address of the main author together with instructions for oral or poster presentations.
- The authors of an accepted (oral/poster) abstract must register for the congress before August 1, 2006.
- Please follow the instructions on the form.

TERMIS Membership

There are two simple ways to continue to be a member of our global community through TERMIS. The first method to maintain your membership is to attend one of the TERMIS meetings each year. All registrations for TERMIS meetings will include a membership in the Society. In 2006, the TERMIS meetings are in Pittsburgh from April 24-27 and Rotterdam from October 8-11. In 2007, the meetings will be in Tokyo, London and Toronto. If you are unable to attend a TERMIS meeting you should renew your membership on-line as soon as possible.

If you are unable to attend a TERMIS meeting and would like to renew your membership, please complete the online membership form located on the TERMIS website, www.termis.org under the Membership tab.

TERMIS membership dues are as follows:

Regular Membership:	$100.00 USD
Student Membership:	$ 25.00 USD

TERMIS Membership Benefits

Reduced subscription rate to the journal, Tissue Engineering, the official journal of TERMIS. In 2006, the journal will begin publishing twelve issues per year.

TERMIS electronic newsletter, interlink, that is emailed quarterly to the membership.

Reduced registration fees to meetings endorsed by TERMIS.

Posting Career Opportunities for one month on the TERMIS website for members only.

Updates on the latest news and developments of TERMIS through the website and email.

Subscription to the Journal, *Tissue Engineering*

Members of TERMIS may purchase a subscription to the Journal, Tissue Engineering, at a discounted membership rate. The journal, Tissue Engineering, published by Mary Ann Liebert Publications, Inc., is the official journal of TERMIS. If you are interested in subscribing to the journal, please check the correct box on the online membership form. We are currently negotiating with the publisher of Tissue Engineering to provide an even more attractive benefit to our members.

2006 Journal Rates:

U.S./Canada Print Subscriptions:	$ 89.00 USD
International Print Subscriptions:	$133.00 USD

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