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Volume XI, Issue IV

LINKING THE INTERNATIONAL COMMUNITY OF TERMIS

IN THIS ISSUE

Thank you to Our Members!

We thank all of for you for your continued support of the Society. Your dedication to furthering the research within the field of TERM is key to fostering new ideas and supports the overall mission of the Society, which is to ultimately contribute to the care of patients.

Yours Sincerely,

The TERMIS Governing Board and Chapter Council Members

Tissue Engineering, Parts A, B and C, the official journal of TERMIS

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TERMIS-AM IMPORTANT DEADLINES

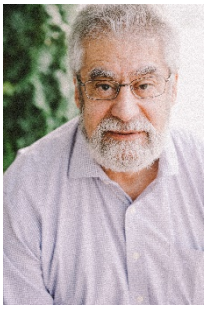
2017 Awards Program

Nominations packages dues: June 16, 2017

2017 TERMIS-AM Conference: Charlotte, NC December 3-6

Call for Symposia & Pre Conference Workshops announced in January 2017

2016 TERMIS-AM Award Recipients



Michael Sefton - Lifetime Achievement Award

MICHAEL V. SEFTON is University Professor and Michael E. Charles Professor in the Department of Chemical Engineering and Applied Chemistry and the Institute of Biomaterials and Biomedical Engineering, University of Toronto. He was Director of the Institute of Biomaterials and Biomedical Engineering at the University of Toronto from 1999-2005 and President of the US Society For Biomaterials in 2006. He has received the Founders Award of the US Society For Biomaterials, the Killam Prize in Engineering of the Canada Council and the Acta Biomaterialia Gold award (among others). He has been active in the preparation of blood compatible materials through heparinization, the microencapsulation of mammalian cells in synthetic polymers and various strategies for vascularizing tissue constructs. He was elected an international member of the US National Academy of Medicine in 2014 and received the Terumo Global Science prize in 2016.

Ali Khademhosseini - Senior Scientist Award

Ali Khademhosseini is Professor of Medicine at Harvard Medical School and Director of the Biomaterials Innovation Research Center at Brigham and Women's Hospital. He is also a faculty at the Harvard-MIT Division of Health Sciences and Technology as well as an Associate Faculty at the Wyss Institute for Biologically Inspired Engineering and a Junior PI at Japan's World Premier International-Advanced Institute for Materials Research at Tohoku University where he directs a satellite laboratory. He is recognized as a leader in combining micro- and nano-engineering approaches with advanced biomaterials for regenerative medicine applications. In particular, his laboratory has pioneered numerous technologies and materials for controlling the architecture and function of engineered vascularized tissues. He has authored over 450 journal papers (H-index = 83, ~25,000 citations) and 50 books/chapters. In addition, he has delivered 250+ invited/keynote lectures. Dr. Khademhosseini's interdisciplinary research has been recognized by over 40 major national and international awards. He is a recipient of the Presidential Early Career Award for Scientists and Engineers, the highest honor given by the US government for early career investigators. He is also a fellow of the American Institute of Medical and Biological Engineering (AIMBE), Biomedical Engineering Society (BMES), Royal Society of Chemistry (RSC), Fellow of the Biomaterials Sciences and Engineering (FBSE) and American Association for the Advancement of Science (AAAS). Currently he serves on the editorial board of numerous leading journals as well as an Associate Editor for ACS Nano (IF: 12) and a permanent member of NIH BTSS study section. He received his Ph.D. in bioengineering from MIT (2005), and MASc (2001) and BASc (1999) degrees from University of Toronto both in chemical engineering. Read more at: http://www.tissueeng.net/

Johnna Temenoff - Educational Award

Dr. Johnna Temenoff joined the faculty in the Coulter Deparment of Biomedical Engineering at Georgia Tech/Emory University in 2005. She has been honored previously with several awards, such as the NSF CAREER Award and the Arthritis Foundation Investigator Award, and was named to the College of Fellows of the American Institute for Medical and Biological Engineers (AIMBE) in 2015. She also acts as the Co-Director for the Regenerative Engineering and Medicine Center, a statewide initiative encompassing three premier research universities in Georgia (Georgia Tech, Emory University, and the University of Georgia). Dr. Temenoff has demonstrated her commitment to undergraduate biomaterials education by co-authored a highly successful introductory textbook - Biomaterials: The Intersection of Biology and Materials Science, by J.S. Temenoff and A.G. Mikos. This book has been adopted in over 50 universities, and has been printed in three international editions. In response, Dr. Temenoff and Dr. Mikos were awarded the American Society for Engineering Education's 2010 Meriam/Wiley

Distinguished Author Award for best new engineering textbook.

Jordan Green - Young Investigator Award

Dr. Jordan J. Green is an Associate Professor of Biomedical Engineering, Ophthalmology, Oncology, Neurosurgery, and Materials Science & Engineering at the Johns Hopkins University School of Medicine. He is also co-founder of the Translational Tissue Engineering Center at JHU and an executive committee member of the Institute for NanoBioTechnology at JHU. Dr. Green received his B.S. in chemical engineering and in biomedical engineering from Carnegie Mellon University in 2003 and completed his Ph.D. in biological engineering from the Massachusetts Institute of Technology in 2007. His work has resulted in the publication of over 70 papers and he has received numerous awards including the American Institute of Chemical Engineers Allan P. Colburn Award, the Biomedical Engineering Society Rita Schaffer Award, the Presidential Early Career Award for Scientists and Engineers, and was named by Popular Science as one of the "Brilliant Ten." Dr. Green's main research interests are in creating biomaterials and nanobiotechnology for regenerative medicine and advanced therapeutics.

Jenna Dziki - Mary Ann Liebert, Inc. Outstanding Student Award

Jenna Dziki is a third year PhD student in the Department of Bioengineering at the University of Pittsburgh in Dr. Badylak's laboratory. She is a National Science Foundation Graduate Research Fellow, has co-authored 14 publications in journals including Biomaterials, Science Advances, Science Translational Medicine, and Nature Regenerative Medicine. Her research focuses on regenerative medicine strategies for skeletal muscle repair.

TERMIS-EU Important Deadlines

2017 Awards Program

Nominations packages dues: 28 February 2017

5th TERMIS/Expertissues Winterschool 2017

Radstadt, Austria

"In Vitro/In Vivo Preclinical Models and Imaging in Musculoskeletal Tissue Regeneration"

15-18 January 2017

Important Conference Deadlines

Early Bird Registration Deadline

30th March 2017

Business Plan Competition Application Deadline

27th January 2017

Conference Program

An overview of the programming for the conference is posted online.

List of Accepted Symposia – Society & Standard Symposia

The list of accepted Society Symposia's and Standard Symposia's are provided on the conference site.

2017 Business Plan Competition

termis Business Plan Competition

The No.1 Platform for TERM Start-Ups

Written by: Chris Gemmiti, PhD; Aby Mathew, PhD and Tracy Yu, PhD

How It Started – Chris Gemmiti, PhD. Business Development Lead, Wyss Institute for Biologically Inspired Engineering at Harvard University, Co-Chair, TERMIS-AM Commercialization & Regulation TWIG

The TERMIS Business Plan Competition is an opportunity for budding entrepreneurs to present their research as a potential future company. Started in 2014 at the TERMIS-AM meeting in Washington, DC the Commercialization and Regulation Thematic Working Interest Group wanted to give scientists a roadmap for translating their science into business.

A need was recognized in undergraduate and graduate students who, while they are passionate about their research, were equally interested in getting the technology to patients. However, many students are without management coursework or academic opportunities to explore business planning; the Commercialization and Regulation TWIG sought to address that need. The Business Plan Competition provides a framework to create a business plan, pushing the students to understand the breadth of challenges that go into bringing something to market: financial, clinical, regulatory, competition, manufacturing and the like. Besides giving students the framework for a written business plan, the Business Plan Competition resulted in live presentations (via poster and podium) to a panel of industry experts. Like any successful venture, the ability to clearly and concisely explain the value proposition and novelty of a business in person is key – as well as the ability to answer tough, probing questions and handle objections. While the intent of the Competition is to give each and every team exposure and opportunity to learn in an academic setting, winners were announced and went home with a cash prize, not to mention the honor of calling themselves a Business Plan Competition winner! We hope that this process gives students inspiration and maybe even the start they need to realize their visions. Additionally, we are always looking for additional help and ideas to improving the Competition and fulfilling membership needs.

Branching Out to TERMIS-EU – Tracy Yu, Committee Chair & Co-Founder, GuiZhen Teoh, PhD. Committee Member, Oliver Ball, Committee Member, Richard Balint, PhD. Committee Member at TERMIS-EU BPC Organising Committee

To that end, the launch of the TERMIS Business Plan Competition within another Chapter successfully took place at the 2016 TERMIS-EU conference in Uppsala, Sweden and in 2017 - we will be heading to Davos, Switzerland. Our aim is to inspire and equip innovative early career researchers in the fields of tissue engineering and regenerative medicine and accelerate the translation of their life-changing ideas from bench to market.

Entrants were invited to submit a 2-page executive summary business plan for their start-up proposal, of which 8 teams were selected to progress to enter the finals. Each finalist team received support for the preparation of their full 10-page business plan through mentorship from an experienced industry figure, and through a series of online webinars featuring high-profile guest speakers. 7 finalists pitched at the 2016 TERMIS-EU BPC Final Competition, following which the results were announced.

Our 2016 BPC alumni:

BIOreACT – 3B's Research Group, Portugal

FeDOX iron delivering oxygen – University of Southampton, UK

LambdaGen – Nanyang Technological, Singapore

HydrUStent – 3B's Research Group, Portugal

Lymphatica – EPFL, Lausanne, Switzerland

restorgan – King's College London, UK

SUINCAL – EPFL, Lausanne, Switzerland

We thank our 2016 competition alumni for their truly outstanding entries, and wish them all the best for the future! *For more information about our 2016 BPC alumni please check TERMIS-EU Business Plan Competition official website: http://termisbpc.org/competition/2016-finalists/*

2017 Business Plan Competition

For the 2017 round, we will be accepting submissions for the TERMIS-EU Business Plan Competition from 19th December; application deadline: 27th January 2017. In the meantime, we have teamed up with leading speakers to bring you an innovative and informative Pre-Accelerator Program: tune in on the day, or catch-up after the session via our YouTube channel. An overview of the 2017 Competition Programme is shown in the diagram below:

TERMIS Pre-Accelerator Programme

Sharing the experience of senior industrial leaders and healthcare innovators

PAP Webinars
Pre-Accelerator Programme

TERMIS Pre-Accelerator Programme (TERMIS PAP) is a series of online seminars given by key opinion leaders in the tissue engineering and regenerative medicine (TERM) arena. The seminars are free and open for anyone to attend; designed to give entrepreneurial students and researchers an overview of the pre-market commercialisation challenges specific to the TERM fields.

The TERMIS PAP also allows prospective commercial entities and/or existing start-ups to identify and discuss previously unaccounted risks and uncertainties that may present barriers to success, whether in IP strategy, scalability, or other. Through attending the seminars, participants will gain a wealth of know-how and insight into the needs of a business plan ahead of their participation in TERMIS-EU BPC.

Subscribe to our mailing list *at: http://termisbpc.org/contact/ and we will keep you up-to-date on how you can participate in TERMIS-EU 2017 PAP and BPC!*

Closing Thoughts – Aby J. Mathew, PhD. Senior Vice President & Chief Technology Officer, BioLife Solutions, Inc. Co-Chair, TERMIS-AM Commercialization & Regulation TWIG

In December 2016, the TERMIS-AM conference in San Diego hosts its Business Plan Competition oral presentations and posters. As a notable step in its evolution, we have our first TERMIS-AM Business Plan Competition alum coming on board as a Judge for the TERMIS-AM Business Plan Competition Finals in December. The TERMIS Business Plan Competition has generated a high caliber of submissions since its inception, rapid growth to multiple Chapters, commercial sponsorship for prizes, and high attendance at the Finalist oral presentations. All of us involved with the TERMIS Business Plan Competitions are proud of the opportunity for professional development that it has created, the quality of what has been able to present to the TERMIS membership, and its next steps in the future.

2016 AM Business Plan Competition

1st Place: Novothelium

2nd Place: Layer up

Veterinary Regenerative Medicine Thematic Group

What veterinary medicine can contribute to the field of regenerative medicine:

When it comes to translating pioneering innovations from bench to bedside, co-operation between teams of natural scientists, human and veterinary medical scientists are essential to expedite the process. This symbiosis is particularly apparent in the rapidly growing field of regenerative medicine. The veterinary profession has an important role in the translational process offering the missing link between basic science and human clinical applications. Many natural occurring diseases encountered in humans also pose a problem in veterinary patients with similar pathology and aetiopathogenesis. These diseases certainly raise the interest in regenerative medical treatments from the veterinary profession but, at the same time, offer a relevant model for human patients, much better than artificially created diseases in rodent lab animal models which do not accurately reflect the clinical situation in humans. Following the idea of "One Health" for expanding interdisciplinary collaborations and joining efforts in the development and evaluation of new methods for the prevention and control of diseases across species (humans and animals), the "International Veterinary Regenerative Medicine Society" has joined TERMIS to form a thematic subgroup. This subgroup has since been offering veterinary sessions at the TERMIS World Conferences and European Chapter meetings. The main focus of these sessions have been the clinical application of regenerative therapy approaches in the veterinary field and the potential of veterinary patients as large animal models of naturally occurring disease for human medical research. Animal models are an important and necessary part of the development of any translational treatment development and require careful selection and design to ensure they are fit-for-purpose and provide optimal predictive validity, while taking ethical, animal-welfare and societal considerations into account. In addition they should ideally fulfil the requirements of the European Medicines Agency (EMA), the USA Federal Food and Drug Administration and the International Society for Stem Cell Research (ISSCR) who recommend the use of large animal models to evaluate efficacy, durability, dose response, degradation and safety prior to obtaining market approval of advanced therapeutic medicinal products (ATMPs). Therefore large animal models play an increasingly important role in tissue engineering/regenerative medicine (TE/RM) research where significant knowledge is being gained, with each species providing useful preclinical models in relation to specific human body systems. However, animals are often viewed simply as models for new medical approaches, but in recent years clinical TE/RM applications in animal patients have been gaining momentum.

Despite the "One health, one Medicine" concept, clinical knowledge is often not exchanged between the veterinary and human medicine communities. At the TERMIS-EU Chapter meeting in Uppsala some of the latest research in veterinary TE/RM and large animal models was highlighted in two well attended sessions and offered new perspectives which should help build collaboration and communication between the veterinary and human medicine and basic science communities. In these sessions, translational aspects and results from clinical case studies and trials were dicussed and are briefly summarised below:

Session 1: Stem cells in tissue engineering and regenerative medicine - lessons learned from large animals

Key Note: Mario Baratta: **Purification of ruminant mammary stem cell population and uses thereof for production of transgenic proteins in vivo:** Bovine mammary tissue contains lineage-restricted progenitors with *in vitro* clonogenic activity as well as more primitive uncommitted cells that regenerate bilayered multilineage milk-producing mammary structures when transplanted in immunodeficient mice. The ability of isolated ruminant mammary cells to regenerate mammary tissue following their transplantation into a histocompatible recipient is a proof concept that it is possible to engineer these cells to produce human beta casein, a major component of human milk.

Louis Penning: **Transplantation of gene supplemented autologous hepatic stem cell organoids in a COMMD1 deficient dog:** No adverse effect of the transplanted cells was observed. The transplanted cells could be identified in the liver from biopsies. This animal model allows for long term longitudinal studies to potentially verify functional recovery on the one hand and to observe possible side effects of autologous cell transplantation on the other.

Anna Lange-Consiglio: **Microvesicles from amniotic cells as potential novel therapeutics in regenerative medicine: first in vitro result in equine stressed tendon and endometrial cells:** Aims of this study were to investigate the presence and type of microvesicles (MVs) secreted by equine amniotic mesenchymal cells, their incorporation into equine tendon and endometrial cells and their effect on these cell lines stressed by lipopolysaccharide (LPS) *in vitro*. MVs induced a significant ($P<0.05$) down-regulation of *TNF-α*, *MMP1* and *MMP13* expression in both cell lines after *in vitro* LPS stress, and up-regulation of *TGF-ß* expression.

Cristina Esteves: **A novel method for sorting equine MSC subpopulations: isolation and characterization of pericytes and adventitial cells**: This study described a successful method for isolating equine pericytes ($CD146+$) and adventitial cells (ACs) ($CD34+$) and expanding and maintaining these cells in culture. It was also shown that both pericytes and ACs display an MSC-like phenotype, including expression of MSC markers and capacity for tri-lineage differentiation. These findings are in agreement with previous results showing co-localization of MSC and perivascular markers in equine tissues. Through their pro-angiogenic effects pericytes may provide a potentially superior regenerative subpopulation of MSCs.

Anika Weigand: **Bone Tissue Engineering using mesenchymal stem cells and endothelial progenitor cells in the large animal model sheep**: This study demonstrated that mesenchymal stem cells (MSC) and endothelial progenitor cells (EPC) are suitable cell sources for bone tissue engineering purposes. MSC and EPC co-cultures with supplemental growth factors may lead to improved vascularization and bone formation in tissue engineered constructs. In future studies a bone substitute in combination with MSC, EPC and growth factors will be implanted into bone defects to gain important insights for early clinical application.

Iris Ribitsch: **Repair processes at the protein level – an exploratory whole-proteome profiling approach to follow up tendon and cartilage healing**: The presented data offered a broad overview of proteins expressed at different healing stages which allows insight into the processes of inflammation

and healing. This may not only contribute to a better understanding of the interrelations during inflammation and healing but also help understand at which stage of healing to set which therapy measures to achieve full regeneration rather than scarring repair in the future.

Session 2:Clinical applications in veterinary tissue engineering and regenerative medicine

Key Note: Michael Schramme: **Regenerative therapies for lameness in horses**: The talk offered an overview on the 3 most common regenerative medical treatments in equine patients - autologous conditioned serum, platelet rich plasma and mesenchymal stem cells – on the typical indications for which they are applied, the state of research, clinical evidence and similarities to human medicine.

Jayesh Dudhia: **Spontaneous and induced tendon disease models in the horse and sheep**: The findings presented in this talk support the horse as a large animal model for assessing regenerative treatments using the naturally occurring overstrain injury of the superficial digital flexor tendon. An induced model of intra-thecal/synovial tendon injury in the sheep showed similarities to rotator cuff injuries in man with poor spontaneous healing and minimal signs of inflammation. The results demonstrate that the synovial fluid environment around the lesion represents a major challenge and the validation of this novel model offers opportunities to develop therapeutic strategies that overcome this environment.

Marco Patruno: **Efficacy of conventional versus innovative therapies for treating skin wounds in veterinary medicine:** The aim of this study was to verify the efficacy of conventional and innovative treatments on the regeneration of skin wounds induced experimentally in sheep. Different types of investigations (clinical, molecular, histological, immunohistochemical) were performed. Acemannan gel, Manuka Honey, hyaluronic acid, plasma (ionized gas), allogeneic mesenchymal stem cells isolated from peripheral blood, or placebo were applied. The results suggested that the innovative therapies, using plasma and MSC, promoted more rapid healing.

Marianna Tryfonidou: **Preclinical intradiscal application of celecoxib loaded hydrogels in experimental dogs and canine patients with low back pain:** This study showed biocompatibility and safe intradiscal application of celecoxib (CXB), a COX-2 inhibitor, in loaded and unloaded thermoreversible hydrogels in a large animal model (experimental dogs and canine clinical patients). Ongoing studies concentrate on (a) the long term clinical follow up of these canine patients, and (b) on determining the optimal loading dose of CXB for clinical efficacy. In this setup, the dog can be used as a model for the development of novel treatment modalities in both canine and human patients with chronic low back pain.

Laura Ramio Lluch: **Development and clinical outcomes of an autologous canine engineered skin:** An artificial complete skin (dermis and epidermis) has been successfully developed and used for treatment of large skin defects in dog. One of the limitations in the treatment of large skin injuries is the insufficient extent of autologous skin donor sites to cover the wound. This problem could be solved by tissue engineering. In the present study a large surface of autologous artificial skin was developed from a small skin biopsy.

L Lacitignola: **Plasma-coated polycaprolactone scaffold in ovine model of osteochondral defect**:
The aim of this study was to conduct *in vivo* testing of a plasma-coated polycaprolactone (PCL) scaffold in an osteochondral defect in the sheep. The groups treated with PCL + PDE (plasma deposited ethylene) + bone marrow derived mesenchymal stem cells (BMSCs) exhibited better osseointegration than the other groups, thereby demonstrating the superior ability of the biomaterial coated with plasma to support BMSCs and ameliorate the healing process.

Posters:

Iris Ribitsch: **Isolation of mesenchymal stem cells from ovine placenta cotyledons**: Ovine placenta cotyledons were suggested to be an abundantly available, minimal invasive, source of MSC in sheep.

Catharina De Schauwer: **Characterization of equine mesenchymal stromal cells from non-invasive sources**: The presented data strengthen recent findings that inherent differences exist between MSC from different tissues, as suggested for human MSC. Umbilical cord blood (UCB) was proposed as the most promising non-invasive alternative source for MSC and umbilical cord matrix as the least feasible source due to high contamination risks. Moreover, the data indicated that UCB-derived MSC could be suited for allogeneic use, although their immunogenicity potential needs to be addressed in more detail in future studies.

Karin Amilon: **Antibacterial effects of equine mesenchymal stem cells:** Similar to reported data for human MSCs, equine BM-MSCs inhibited growth of *S. aureus* in culture, suggesting a direct antibacterial effect, although there were no associated changes in expression of antimicrobial peptide genes. However, BM-MSCs were responsive to LPS stimulation, as demonstrated by upregulation of genes with immune function, suggesting that equine MSCs may possess antibacterial activity against Gram-negative bacteria.

Antonio Crovace: **Autologous bone marrow mononuclear cells in the treatment of type I un-united anconeal (UAP) process in dogs:** Bone marrow mononuclear cells were injected, under CT guidance, in the ossification centres of the anconeal processes affected by UAP. The results obtained in this study using a few cases suggest this as a possible alternative and innovative application of cell therapy to the treatment of type I UAP in dogs

The Veterinary subgroup will be offering sessions again at forth-coming TERMIS conferences. We would be happy to welcome you there to discuss new ideas and build closer cooperation between basic researchers, veterinarians and human medical scientists to drive the field of regenerative medicine forward for the benefit of both human and veterinary patients.

Interview: Jordan Green

An interview with Jordan Green, recipient of the 2016 TERMIS-AM Young Investigator Award and an Associate Professor of Biomedical Engineering, Ophthalmology, Oncology, Neurosurgery, and Materials Science & Engineering at the Institute for NanoBioTechnology and Translational Tissue Engineering Center, at Johns Hopkins University School of Medicine.

1. What is the goal of your lab and what problem are you hoping to impact in your work?

Our lab is interested in engineering cells to direct their behavior in order to improve human health. In some of our research we engineer the cells by delivering genetic instructions, encoded in DNA, siRNA, and miRNA, and delivered by polymeric nanoparticles to target cells. In other research, we design biomimetic materials, biomaterials that mimic natural biomolecules and cells, to drive the behavior of target biological cells. Overall, we create biotechnologies and nanotechnologies with a focus on regenerative medicine, oncology, and ophthalmology.

2. What do you think is unique about your lab/approach?

The secret of our lab is that I work with a team of superheroes. I feel very fortunate to be surrounded by such wonderful students, fellows, colleagues, and collaborators. We try to take an interdisciplinary approach and are enthusiastic about learning and inventing at the interface with other fields. Our lab is especially interested in the design and engineering of new enabling technologies. We also work with clinicians to be mindful of the challenges that they and their patients face and use these as opportunities for new developments.

3. Who are your team?

My lab team is composed of 7 Ph.D. candidate graduate students, 1 visiting Ph.D. student, 1 postdoc, 1 resident, 12 undergraduate students, and 2 high school students. Just as critical are our collaborative team members, including faculty and fellows from both clinical departments and basic science departments.

4. What emerging areas of tissue engineering and regenerative medicine are most exciting to you and why?

I am most excited about biomimetic instructive materials and immunoengineering. These are both areas that have huge potential to interface with tissue engineering and regenerative medicine on multiple levels. Biomimetic instructive materials have the potential to accomplish many regenerative medicine goals in a cell-free manner, which may lead to much more rapid translation and commercialization of the technologies. Immunoengineering is exciting as not only could it enable novel solutions to transplantation through local immunomodulation and improved interactions between biomaterials and biological interfaces, but it could also have far reaching implications to other areas of medicine, such as generating new therapeutic approaches to combat cancer and infectious diseases.

5. What do you hope the field has achieved in 20 years?

I hope that the field has expanded the number of FDA-approved cellular therapies, developed FDA-approved regenerative gene therapies for the first time, and made available a large number of biomaterial-based therapeutics and devices to enable tissue engineering throughout multiple areas of the body, benefiting the lives of millions of patients and their families. I also hope that these medical solutions become ever more precise and personalized to the needs of the patient and that the many different stakeholders, including government and business, work increasingly closely with scientists and clinicians to achieve these goals.

Austrian Cluster for Tissue Regeneration

Ludwig Boltzmann Institut für experimentelle und klinische Traumatologie

SAVE THE DATE

5th TERMIS/Expertissues

Winterschool 2017

"In Vitro/In Vivo Preclinical Models and Imaging in Musculoskeletal Tissue Regeneration"

Radstadt – Austria January 15th-18th, 2017

With support from the Society of the Advancement of Research in Shock and Tissue Regeneration

AUVA

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EXPERTISSUES

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TERMIS-AP News

Upcoming Conferences

All conferences listed have been reviewed and approved for endorsement by the TERMIS Endorsement Committee.

January 2017

- 5th TERMIS/Expertissues Winterschool 2017
  Winterschool Dates: January 15-18, 2017
  Winterschool Location: Radstadt, Austria
  Winterschool Theme: "In Vitro / In Vivo Preclinical Models and Imaging in Musculoskeletal Tissue Regeneration"
  Contact: Mag. Bettina Standhartinger: Tel: +43-5-9393-41961 or office@trauma.lbg.ac.at

June 2017

- Regenerative Medicine Summer School 2017
  Summer School Dates: June 4-10, 2017
  Summer School Location: University of Pittsburgh, Pittsburgh, PA
- 6th International Conference on Tissue Engineering in conjuction with the 3rd International Conference on Regenerative Biomedical Materials
  Conference Dates: June 14-19, 2017
  Conference Location: Aldemar Knossos Royal Village Conference Center, Heraklion, Crete, Greece
- 2017 TERMIS-EU Conference
  Conference Dates: 26-30 June 2017
  Conference Location: Davos Conference Center, Davos, Switzerland
  Conference Chair: R. Geoff Richards, PhD
  Conference Program Chair: Mauro Alini, PhD

July 2017

- 2nd International Conference on Tissue Engineering and Regenerative Medicine
  Conference Dates: July 26-30, 2017
  Conference Location: Tshwane University of Technology, Vanderbijlpark, South Africa

September 2017

- 2017 TERMIS-AP Conference
  Conference Dates: September 21-24, 2017
  Conference Location: Nantong, China
  Conference Chairs: Prof. Dr. Xiaosong Gu, Dr. Xiaobin Fu, and Dr. Yilin Cao
  Program Chairs: Dr. Fei Ding and Dr. Wei Liu

December 2017

- 2017 TERMIS-AM Conference
  Conference Dates: December 3-6, 2017
  Conference Location: Charlotte Convention Center
  Conference Chair: Anthony Atala, MD
  Conference Program Chair: Shay Soker, PhD

September 2018

- 2018 TERMIS World Congress - Kyoto, Japan
  World Congress Dates: September 4-7, 2018
  Location: Kyoto International Conference Center
  Co-Chairs: Yasuhiko Tabata, PhD and Yoshiki Sawa, MD, PhD

June 2019

- 2019 TERMIS-EU Conference - Crete, Greece
  Conference Dates: 24th - 28th June 2019
  Conference Location: Creta Maris Convention Center
  Conference Theme: Tissue Engineering Therapies: From Concept to Clinical Translation & Commercialisation
  Conference Chair: Dr. Dimitrios Zeugolis
  Program Chair: Dr. Maria Chatzinikolaidou

October 2019

- 2019 TERMIS-AP Conference - Brisbane, Australia
  Conference Dates: October 14-18, 2019
  Conference Location: Brisbane Convention & Exhibition Centre
  Conference Chair: Prof. Yin Xiao

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To accomplish its mission, TERMIS brings together the international community of persons engaged or interested in the field of tissue engineering and regenerative medicine and promotes education and research within the field of tissue engineering and regenerative medicine through regular meetings, publications and other forms of communication. The Society also serves as an international forum to promote the informed discussion of challenges and therapeutic benefits of the application of tissue engineering and regenerative medicine technologies.

Most importantly, the Society is committed to bringing you closer to key professionals to support your mutual understanding of the field, accelerate your research in the field and to enable you to contribute to the ultimate care of patients in this very important way.

TERMIS

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INTERESTED IN CONTRIBUTING TO THE TERMIS NEWSLETTER?

CONTACT THE ADMINISTRATOR