President’s Message
By Bob Diegelmann, PhD, Virginia Commonwealth University

Dear WHS Members and Colleagues,

The 2012 WHS Annual Meeting, held jointly with the Symposium on Advanced Wound Care (SAWC) and the European Tissue Repair Society in Atlanta, April 19-22, was another great success! There were many outstanding scientific sessions and ample opportunities for networking and catching up with old friends and making new ones.

A sincere THANKS goes out to Chandan Sen and Joyce Stechmiller for an outstanding job organizing this year’s scientific program. In a pre-conference session, Andrew Baird and Gayle Gordillo organized a very interactive discussion of “Pre-Clinical Models of Wound Healing – Is the Human the Model?” (Gayle provides an in-depth report on page 11) This meeting represented the 6th combined meeting with the European Tissue Repair Society, and Sabine Eming moderated an international session on “Tissue Repair: From Basic Science to Translational Medicine.” Two of our members presented plenary sessions that were major highlights of the meeting. Geoffrey Gurtner gave the society’s keynote address, entitled “Wound Healing: New Reparative and Regenerative Strategies,” that was well received by the entire congress. In addition, Elof Eriksson was recognized as the recipient of the John Boswick Memorial Award and Lectureship and presented a fascinating lecture on “2020: What Will We See in Wound Care?” Another highlight of the meeting was the recognition of Adrian Barbul, MD as our 2012 Lifetime Achievement Award recipient. Dr. Barbul is a founding member of the society, was our first treasurer, served several terms on the Board of Directors, and was our President from 2006 to 2008.

As for presidential business, first of all, I want to thank Harriet Hopf for her outstanding leadership over the past year! One of her major accomplishments was reformatting our annual meeting to better highlight basic science presentations for our members. This year’s Program Committee, co-chaired by Sashwati Roy and Aamir Siddiqui, has been very active in developing an exciting basic science agenda for our next meeting in Denver. At that meeting, we will kick off our 25th Silver Anniversary celebration. As an important change, the WHS meeting will begin on Wednesday, May 1; one day before the SAWC meeting begins. The first day will be filled with invited scientific presentations and we will have the inaugural Thomas Hunt Lectureship presentation. The Wound Healing Society-specific meeting on the first day will be held at the hotel where all of our members will be staying. We have listened to our members and this new “Back to the Future” format is designed like our original meeting plan, where all of our members are together and not lost in a large venue. We will then join in with the main meeting but will have our own WHS track, with all of our presentations and activities held in the same lecture hall. Then our meeting will end on Saturday, May 4. We feel

continued next page
that this new format will provide a better identity for our members and an opportunity to present their latest and best science.

In the coming year we have significantly increased budgets for all of our committees in order to bring further value to our membership. The Membership Committee, co-chaired by Sundeep Keswani and Sue Gardner, has been busy developing innovative strategies to attract new members and to retain all of our current members. Arti Masturzo and the Education Committee are developing several new programs that will continue to bring new values to our membership. The Awards Committee, chaired by Ken Liechty, is exploring new ideas about how to increase our spectrum of incentives for young investigators and attract them to the field. Andrew Baird and the Website Committee have been very active and are developing new initiatives and visibility for our site. Rob Kirsner and Gayle Gordillo have organized a group of clinical specialists to update and revise our guidelines that have proven so valuable to wound care providers as well as regulatory agencies. Luisa DiPietro has repopulated our Publications Committee so they can actively review all scientific publishing activities of the society. Manuela Martins-Green has taken on the initiative to form a Public Relations Committee that will enhance our visibility across the field as well as an increased public awareness of wound healing problems and the most recent advances in research and clinical practice. In addition, Manuela has worked very hard to make this newsletter another highlight of the society.

The journal, under the leadership of Pat Hebda, continues on an impressive path with high-quality publications and the achievement of a 3.443 impact factor. *Advances in Wound Care*, under the leadership of Chandan Sen, continues to evolve, expand, and bring additional resources and values both to our members and those in allied fields.

Overall, the society is doing very well and our membership continues to grow as we look forward to a banner year! So come to Denver in 2013 and join in as we celebrate 25 years of good times and science!

Don’t forget to visit [http://www.woundheal.org](http://www.woundheal.org) to get all the latest news—and renew your membership if you haven’t already.
From the Editor

Balancing the Personal and Academic Aspects of Life Can Be Challenging
By Manuela Martins-Green

Life in academia is highly demanding intellectually and psychologically, and many times we scientists are stretched in multiple directions. We may be caring for a sick child or elderly parent, or mentoring young investigators at the same time that we need to maintain high-level competitive research, acquire funding, teach, and serve on a variety of committees. Many times, our work needs to continue late into the night or start in the wee hours of the morning as well as on the weekends to meet deadlines.

As a consequence, finding time for one’s self or one’s partner and having a semblance of a social life is difficult and can lead to frustration, disappointment, and even depression. So, how does one get out of the rut and maintain equilibrium between academic life and personal life? How does one maintain physical, mental, and emotional health? In this struggle, I have found a few things that help me significantly to lead a healthy, balanced life.

* Flexibility – being flexible helps me to adapt to those very critical times in which a change of plans needs to occur. Doing it with good spirits and a positive attitude goes a long way to help me accept quick change.

* Organization – being organized helps me accomplish tasks in a timely manner and therefore gives me a sense of satisfaction that contributes to my becoming more efficient.

* Ability to make the right decisions – learning to say NO was difficult, but it was critical to maintaining a balanced life. I try to carefully evaluate what is asked of me and, if I have a choice, I choose the commitments that contribute to success for me and those around me, and also have the potential to be the most broadly productive.

* Ability to manage commitments – once I have accepted a responsibility, I try to identify the most effective way to accomplish it appropriately and in a timely manner.

I am sure that you can think of other ways that contribute to establishing a good balance in life and if you feel so inclined please visit our website to share them on FaceBook or Twitter.

In Memoriam: Robert “Bob” Warriner III
by Harriet Hopf, Immediate Past President

We were saddened to learn of the death of Robert “Bob” Warriner, III, MD, FACA, FCCP, FCCWS, ABPM/UHM, FUHM, Chief Medical Officer of Healthologics Inc. and former Chief Medical Officer, Diversified Clinical Services on August 2, 2012 after a long illness.

Bob was an indefatigable advocate for patients, hyperbaric medicine, and good wound care. He represented the Undersea and Hyperbaric Medical Society in discussions with the Centers for Medicare and Medicaid Services (then the Health Care Financing Administra-

tion) that ultimately led to diabetic foot ulcers becoming an approved indication for hyperbaric oxygen therapy in 2002. He lectured widely and effectively on hyperbaric oxygen therapy, wound care, and compliance and billing issues. He co-authored a landmark article that used retrospective data meticulously collected on patients treated under formally standardized management guidelines to identify which patients with diabetic foot ulcers are most likely to benefit from hyperbaric oxygen therapy based on wound / transcutaneous oxygen values obtained at pressure in the hyperbaric chamber.

Bob was tireless in his service to the Wound Healing Society. He served as an active member of the Board of Directors from 2005-2008, where his con-

Continued on page 6
Anyone who knows Luisa DiPietro is usually in awe of her ability to handle, with a quiet calm and gentle manner, a full array of high-level commitments—directing a research center, maintaining an active research lab, serving on NIGMS Council, writing grants and manuscripts, acting as a mentor and collaborator, serving on a host of University committees, traveling to present seminars and talks, and taking leadership roles in her College and the WHS. It doesn’t take anyone long to realize that Lu is able to do twice as much as everyone around her and make it look effortless. Her ability to handle difficult situations is extraordinary. Whether she is responding to someone challenging her ideas at a scientific meeting or mediating a heated discussion between two people with opposing opinions at a conference, she always handles these situations with respect and grace.

LuAnn (as she was known then) received her BS from the University of Illinois in Urbana and her DDS and an MS in Histology from the University of Illinois at Chicago (UIC). It was during dental school that she met her husband, Ira Satinover, an oral surgeon. After receiving her DDS degree, Lu spent a year as a dental intern at Michael Reese Hospital in Chicago. Always interested in research during her professional training, attending an immunology graduate course taught by Katherine Knight convinced Lu that research was her real passion, and she went on to earn her PhD in Immunology in Katherine Knight’s lab at UIC. Interestingly, she wrote much of her dissertation on bed rest while carrying her twin boys—a perfect example of how Lu never only does one thing at a time. Lu received postdoctoral training in angiogenesis research at Northwestern University with Peter Polverini.

After that, she spent a large portion of her research career at Loyola University, where she took her training in immunology and angiogenesis and applied it to wound healing. She established a successful research program in this area, and early on, her lab produced some of the most cited papers describing the role of pro-inflammatory cytokines and pro-angiogenic growth factors during the repair process. In 2006, she returned to her alma mater, tasked with establishing a new Center for Wound Healing and Tissue Regeneration at UIC College of Dentistry. She has a knack for building successful programs, and the CWHTR is just one of many examples of her leadership and team-building abilities.

Lu has dedicated an enormous amount of time to WHS over the last few years. She has served in many capacities, including former chair of the Website committee, former member of the Board of Directors, co-chair of the annual WHS meeting in 2005, and president of WHS in 2010-2011. Those that know Lu or those that have had a chance to speak with her at the many “Meet-the-Mentors” sessions she has participated in at annual WHS meetings are not surprised to learn that much of her time is spent mentoring. Over her career thus far she has officially mentored 14 graduate students and 20 post-docs, but unofficially she has mentored and advised hundreds of people over the years, many of whom have never met Lu before but contact her based on her reputation as a knowledgeable and dependable resource. Fittingly, many of her recent administrative endeavors have revolved around mentoring young faculty, holding several positions at both the College and University level. Most recently, she was named the first Associate Dean for Faculty Affairs in the College of Dentistry at UIC. A large part of her new position will be devoted to increasing the diversity of the faculty and to faculty development. Despite her successes, she remains approachable and easy to talk with.

continued next page
to, which may be why she is so well suited for her many mentoring roles.

Lu’s busy life also includes time spent with her sons, Mike, a Japanese and international business major at the University of Wisconsin, and Scott, a graduate student in mechanical engineering at the University of Colorado, along with her husband Ira, who shares Lu’s love of cycling and hiking. Lu and Ira enjoy biking local trails on weekends, but have also pedaled through the Netherlands and Belgium, and hiked in the mountains of Switzerland and Germany. Most recently, Lu and Ira traveled to Australia, where they went snorkeling in the Great Barrier Reef. Lu’s talent for cooking and baking is often showcased in the DiPietro Lab’s time-honored tradition of monthly “lab lunches,” which reflect her dedication to bringing people together for a common good. She sees the best in everyone around her and knows how to bring that out in her students and colleagues.

Anyone who has worked with Lu comes to quickly appreciate her honesty and intelligence, and her curiosity and passion for the field of wound healing. Lu’s quiet demeanor and legendary equanimity belie her passion for research and commitment to moving the field of wound healing research forward. Lu talks about eventually retiring and living in the Smoky Mountains or somewhere in Europe, but it seems that she continues to take on new roles every day. Those of us that know her well secretly hope that she never retires, because we value her advice and think she has a lot more to contribute to the field of wound healing research.

In Memoriam, from page 4

tributions to discussions were always insightful and timely. He also served on numerous committees, was a frequent speaker at the combined SAWC/WHS Meetings, and was a cheerful and inspirational presence at our meetings. He was perhaps most effective in his informal role as a liaison to the hyperbaric medicine community.

Bob was a good friend. I counted on him to keep me up to date on all the happenings in the world of wound care and hyperbaric medicine. We collaborated on the chapter on the use of hyperbaric oxygen therapy for problem (hypoxic) wounds for the Hyperbaric Oxygen Therapy Committee Report—the latest version is currently in press.

Dr. Warriner attended Tulane University receiving a BS degree in Biology and a commission in the United States Air Force in 1972. A graduate of Vanderbilt Medical School in Nashville, Tennessee, Dr. Warriner completed an internship in general surgery and residency in anesthesiology. In 1980, he completed a fellowship in anesthesiology and critical care medicine at Harvard Medical School and Beth Israel Hospital in Boston, Massachusetts, followed by four years of active duty in the United States Air Force as the Director of the Surgical Intensive Care Unit at Wilford Hall USAF Medical Center in San Antonio and Chief of Anesthesiology at USAF Hospital Luke in Glendale, Arizona. From 1984 until 2002, Dr. Warriner served on the staff of the Department of Anesthesiology, Medical Center Hospital, Conroe, Texas, serving as its Chairman from 1985 until 1990. He founded the Southeast Texas Center for Wound Care and Hyperbaric Medicine at Conroe Regional Medical Center Hospital in 1991 and served as Medical Director until 2002, when he joined Praxis Clinical Services.

In lieu of flowers family requests donations be made to one or all of the following:

Mexico Missions: First Baptist Church of The Woodlands. 11801 Grogans Mill Rd., The Woodlands TX 77380

Volunteer Services: University of Texas, MD Anderson Cancer Center, Texas Medical Center, Houston TX.

Barry University, School of Podiatric Medicine, Neuropathy Prevention Research Scholarship (Please follow link: http://www.barry.edu/podiatry/news/article.html?id=21216 )

If you wish to donate to the Wound Healing Society in his memory, there is a place on the form to indicate his name.
National & International Meetings

September 2-6, 2012
EMBO Conference Series: The Molecular and Cellular Basis of Regeneration and Tissue Repair
Oxford, UK
Telephone: 49 6221 8891 102
www.embo.org

September 2-7, 2012
4th Annual World Union of Wound Healing Societies (WUWHS) Conference
Pacifico Yokahama, Yokahama, Japan
Telephone: 81 3 5216 5318
Email: wuwhs2012@congre.co.jp

September 5-8, 2012
Tissue Engineering International & Regeneration Medicine Society (TERMIS) Third World Congress
Hofburg Conference Center, Vienna, Austria
Telephone: 43 1 3310 462
Email: office@trauma.lbg.ac.at

September 9-13, 2012
International Society for Burn Injuries
Edinburgh, Scotland
Email: info@isbi2012-edinburgh.org

September 12-14, 2012
Symposium on Advanced Wound Care
Baltimore Convention Center, Baltimore, MD
fall.sawc.net

October 4-5, 2012
European Tissue Repair Society Meeting
Royal Olympic Hotel, Athens, Greece
www.etrss.org

October 8-9, 2012
Native American Wound Care Conference
Cabazon, CA

October 20-23, 2012
Clinical Symposium on Advances in Skin & Wound Care
Caesar’s Palace Hotel & Casino
Las Vegas, NV
Phone: 800-346-7844 x 7793
Email: Helen.solensky@wolterskluwer.com

November 11-14, 2012
American Society for Matrix Biology/Society for Glycobiology Annual Meeting
Sheraton San Diego Hotel & Marina, San Diego, CA
Telephone: 301-634-7814
Email: asmb@asmb.net

November 12-14, 2012
Wounds UK
Harrogate International Centre, United Kingdom

December 15-19, 2012
American Society for Cell Biology (ASCB) Annual Conference
San Francisco, CA
Telephone: 301-347-9300
www.ascb.org

April 23-26, 2013
American Burn Association Annual Meeting
Palm Springs Convention Center, Palm Springs, CA
Telephone: 312-642-9260
www.ameriburn.org

May 1-5, 2013
Symposium on Advanced Wound Care (SAWC) Spring Meeting
Wound Healing Society Annual Meeting
Colorado Convention Center, Denver, CO
http://spring.sawc.net
www.woundheal.org

June 13-13, 2013
Undersea and Hyperbaric Medicine Society Annual Scientific Meeting
Royal Pacific Resort, Orlando, FL
Telephone: 919-490-5140/877-533-8467
http://membership.uhms.org/?page=CoursesMeetings
Based on remarks at the “Meet the Mentors” session at the 2012 Wound Healing Society / SAWC Joint Annual Meeting

Mentoring

Mentoring has been defined as “a dynamic, reciprocal relationship in a work environment between an advanced career incumbent and a beginner aimed at promoting the development of both.”(1) In this model, the mentor is seen as a teacher, protector, role model, and advisor. This is a useful definition for one type of mentoring relationship: the traditional research mentor relationship common for most scientists-in-training. However, I believe it leaves out the richness of the world that is mentoring relationships—for example, what about peer mentors?

Therefore, I choose to define mentoring from a more functional perspective. Mentoring, to me, is indeed a “dynamic and reciprocal relationship” between two people “aimed at promoting the development of both.” The richness comes from the variety of people you can find to mentor you, and the variety of areas of development you may be targeting.

I divide mentoring relationships into three components:

- **Duration (longitudinal vs. short burst)**
- **Scope (focused vs. comprehensive)**
- **Focus (professional vs. personal)**

I have had effective relationships in each of these categories. T.K. Hunt, my comprehensive, longitudinal, research/life/career mentor, has encouraged and enabled my success since 1987, and no one has had a larger impact on who I am and how I see the world. At the other end of the spectrum is a high-impact piece of advice I received from Martha McDaniel, a vascular surgeon who led a session for students interested in surgery when I was a third-year medical student. She said, “Only go into surgery if you can’t imagine doing anything else. Otherwise you will be spending a lot of time imagining doing something else.” I didn’t understand her advice at the time, but boy did it resonate during my surgery internship. Which is partly how I ended up where I belong, in anesthesiology. I am grateful for her mentoring, even though I haven’t seen her since 1986 and it seems likely she doesn’t remember me.

When I think of all the people who have helped me develop—that is, who have mentored me—I can come up with a lot of categories. All are valuable, and I encourage you to seek out and create a mentoring relationship with at least one person in each category:

- Research mentors
- Distant mentors (i.e., not at your institution)
- Academic advancement mentors
- Later career advice mentors
- Professional society mentors (usually distant mentors)
- Mentoring mentors
- Peer mentors
- Teaching mentors
- Chairs
- Life balance mentors

What is a distant mentor? A mentor is someone from another institution, who takes interest in your career even though they have no obligation to you. Adrian Barbul, for example, adopted me as a mentee when I was a young faculty member, and has had an important role in my career development, largely through signing me up for projects and making me finish them.

Peer mentors are enormously valuable, and I encourage you to create groups of peers. Peer mentors act as a sounding board and support system and can help you see things from the perspective of someone currently going through similar experiences. I met my husband, Leo Hopf, when I was a third-year medical student and he was a first-year business school student. We have been peer mentors ever since. His perspective from outside the world of medicine is invaluable. His expertise in strategy and decision-making doesn’t hurt either!

*continued next page*
Finding a Mentor

I hope I have now convinced you that you need mentoring and you need it from a variety of sources. How do you go about finding mentors? The first step is to think about who you are and what you want. While mentors can help you clarify your goals and values, unthinkingly following a path they set out for you is a recipe for frustration and disillusion. An excellent resource for identifying your goals and values is a brief article by Linda Pololi.\(^2\) I recommend you sit down and go through the steps outlined in the article at least once a year. I still find it useful.

After you have a set of goals that are aligned with your values, think about what it is you are looking for in a mentor. Do you need help writing a grant or finding a collaborator? Are you looking for a long-term relationship or short-term assistance with a particular issue? Look around to find someone who could fill your needs.

The next step is to ask that person to be your mentor. Be explicit: tell them what you are looking for and how much of their time you envision you will need. Once they agree, it is your responsibility to manage the relationship. Ask them how they like to communicate (email? phone? regular meetings?). Keep them informed of your progress and request input when you need it. At some point, it will be time to transition to a different relationship. Establish in advance how you will decide when that time has arrived.

Often, mentoring relationships will develop organically, as when you join a lab. In those relationships, it is even more important that you have a conversation with the mentor in which you establish what you want out of the relationship and discuss your own goals and values and how the mentor can help you reach them.

Finding a mentor may not be too difficult, but finding a good mentor who is a good fit for your goals and values can be more challenging. While I have learned much from the ineffective and disagreeable mentors I have encountered, that is only because they served as a contrast to the many spectacular mentors who encouraged and sustained me. What are the qualities you should look for when deciding whether to pursue a mentoring relationship? Think of the three Cs: competence, confidence, and commitment (thanks to Mitch Feldman, MD, for the concept). Competence means the potential mentor has the skills, knowledge, and experience to help you achieve your goals. Confidence means they are willing to help you achieve your goals, and not just looking for someone who will facilitate their own success. Look for someone who provides opportunities, is generous with credit, and is always introducing people to each other. Commitment means the potential mentor is available and accessible. Look to see the time and energy they have invested in other mentees. And remember, that investment of time and energy is easier if the mentee actively manages the relationship.

One of the hallmarks of the best mentors is that they go beyond mentorship to sponsorship.\(^3\) Sponsorship goes beyond giving advice and support. A sponsor uses his or her own influence to advocate for the mentee. Sponsorship is more strongly related to mentee success than mentorship. Your mentor will often hear of opportunities long before you do. Look for someone who has a track record of promoting mentees. This is particularly important for women. Women are less likely to ask for things than men\(^4\) and are less likely to be sponsored (although more likely to be mentored).\(^3\)

Choose your mentors wisely. Don’t become the mentee who writes angrily to the Journal of Cell Science: “…science is ultimately a deceptive effort to get smart, naïve, and idealistic youth to join the ranks of a powerless, poor and exploited labor force.”\(^5\) I believe this phenomenon is largely a measure of unthinking mentor selection. I also believe the system needs to be reformed to provide better oversight of mentors, but until that happens, it is wise to evaluate potential mentors carefully. In particular, you should be looking for a habitual sponsor!

Sometimes, choosing a mentor wisely and achieving your goals come in conflict. What if the only person doing what you want is a clearly dysfunctional mentor? What if the person doing what you want expects you to follow a path you don’t want? What if your good mentors disagree on the best approach to an issue? That is where identifying your goals and values and actively managing your mentoring relationships comes in handy. It’s okay to choose to go into a dysfunctional environment for a limited period of time to learn a specific skill, particularly if you have a strong peer mentoring network and an effective primary mentor for support.

\(^{continued\ next\ page}\)
Creating a Career
Finding a mentor isn’t just about getting over a specific hurdle (getting your first grant, figuring out whether to join a committee); it’s about creating the storyline of your career. Think about your career as a book with many chapters. As you are beginning your career, think about choosing a storyline that you can commit to for the long haul. What is your passion? Can you translate the thing(s) you are passionate about into all aspects of your career (research, teaching, administration, and/or clinical care)? Talk to your mentors. Think about where you want to be and who you want to be. Think about whether the things you are doing will get you there, and whether you can sustain your interest in them for the long haul. The path to failure often starts with: “You need to...” so you do, but your heart isn’t in it; or “I want to...” but there is no one who can help you make it happen. Mindfully putting together your career can help you avoid these pitfalls. Careers can (and maybe should) evolve, but make sure that each arc you enter makes sense for your personal values and goals as they evolve.

You will be asked to make a lot of decisions during your career. Should you serve on this committee? Should you take on that mentee? Should you join this project? Should you write that chapter? Making good decisions is key to creating a rewarding career storyline(6), and one of the areas where people often struggle. Frequently, trainees and faculty alike make decisions based on opportunities that become available, considering “Do I have time?” rather than “How is this valuable?” And most of us are not at all good at saying “No.” Random opportunities are thus allowed to determine our career direction.

If you define the story you want to make of your career, you can use a more proactive approach to decision-making, one that not only makes the most of opportunities that are offered to you, but that encourages you to seek out the opportunities that will help you achieve your goals. Think about what is important to you and what you want to accomplish. Assign precedence to your competing goals. Think about what opportunities will help you achieve these goals and seek them out (this is where a sponsor comes in very handy). When you are offered an opportunity, think about how it fits into the framework of your career. If it doesn’t, say no.

Saying no is an art. When someone asks you to take on a new responsibility, ask for some time to think about it. This takes the pressure off saying no immediately, which is difficult, and will prevent you from saying yes reflexively and regretting it later. Evaluate the opportunity in a timely manner. This is a good time to bring in your mentors for advice. If you decide to say no, think of other people you know for whom this might be a good opportunity, and provide their name(s) along with your answer.

If you say yes, make sure you first clarify the requirements of the opportunity so you know you can meet them. And remember that there are a certain number of tasks that no one enjoys but are critical to your institution. Be a good citizen and take on a reasonable number of those tasks, but don’t allow yourself to torpedo your own career by taking on too many. This is another great discussion to have with your mentor: make a list of all your commitments and talk about how to balance them, which to get rid of, and which new ones to look for; do this in the context of how to have a successful career.

Summary
Mentors and, more importantly, sponsors can help you define and navigate a successful career path. As you are constructing your career, choose a path that will engage your best efforts. When you think “I want to...” and there is a content mentor, and it will benefit your institution, and there are resources, and it is feasible, and you are enthusiastic, and you are willing to develop the skills you need, that is the path to success.

References
Pre-Clinical Models of Wound Healing

By Gayle Gordillo, MD

The Wound Healing Society (WHS) sponsored a half-day pre-conference symposium on pre-clinical models of wound healing at the 2012 annual meeting in Atlanta. Gayle Gordillo, MD and Andrew Baird, PhD served as directors of the symposium entitled, “Pre-Clinical Models of Wound Healing: Is Man the Model?” The objective of the symposium was to stimulate investigators to use human subjects as the initial source material for hypothesis testing or generation, to increase the validity and clinical impact of wound healing research.

The symposium was divided into three segments. The first segment focused on the theme of using human subjects and wound specimens as the source of research material. It began with Robert Diegelmann, PhD, describing his research program based on human subjects. He inserts PTFE tubes subcutaneously into trauma patients to sample the acute wound environment. He analyzes the content of the PTFE tubes using multiple “omics” techniques, and has used this to develop a comprehensive systems biology approach to investigating acute wound healing.

Working directly with clinicians may not be possible for some investigators, so George Sandusky, DVM, PhD, and Director of the Indiana University Simon Cancer Center Tissue Bank spoke on the fundamentals of tissue banking. He stressed the importance of tissue specimen quality assurance, which is done using two different indicators. One of them is RNA integrity number (RIN), and any specimen with a RIN < 6 is considered unacceptable for molecular analyses. The other indicator is accuracy of tissue sampling; e.g., for a tumor at least 65% of the tissue section evaluated by light microscopy contains tumor cells. He also discussed the policies related to tissue sample distribution for his biobank. Thus, the first segment provided attendees with strategies for accessing human material.

The second segment of the conference was designed to discuss alternative approaches to increase the validity of wound healing. It began with Elof Eriksson, MD, PhD, discussing additional alternative approaches to wound healing using human subjects. He also encouraged investigators not to rely on models that have not been validated for the human condition even if they are well established in the literature.

Boris Hinz, PhD, spoke about the importance of using in vitro models for conditions that are not well studied in vivo because of their complexity. He used mechanotransduction as an example, using the rationale that the only way to isolate dynamic cellular responses to mechanical stress from changes in the chemical environment of the cell is using in vitro methods. Susan Volk VMD, PhD followed with a talk on the clinical veterinary experience of problematic wound healing in companion animals (dogs, cats, and horses). Companion animals are exposed to the same environmental factors as their human owners, and they are commonly afflicted with similar comorbidities, such as diabetes and obesity. They often receive advanced clinical care similar to humans and may provide unique translational research opportunities.

The final segment of the symposium was a breakout session designed to identify problems and generate solutions that will enable investigators to pursue research of increasing clinical validity and impact. There were six groups each with two moderators:

1. The role of bio-repositories, led by George Sandusky and Stephanie Bernatchez, PhD;
2. Team science, led by Rob Kirsner, MD and Marjana Tomic-Canic, PhD;
3. Shaping scientific funding (how do we influence NIH and how does NIH influence us?), led by Luisa DiPietro, DDS, PhD, and Chandan Sen, PhD;
4. Getting clinicians to work with you, led by Bob Diegelmann and Elof Eriksson;
5. Access to accepted pre-clinical models, led by Laura Parnell and Susan Volk; and

continued next page
6. The WHS’s role in facilitating progress, led by Harriet Hopf, MD, the outgoing WHS president, and Paul Liu, MD, the incoming president-elect. Some highlights of the discussion include the identification of tight funding, lack of appropriate infrastructure, and the absence of a culture that bridges basic science and clinical practice as important obstacles to team science. The solutions that were developed included starting with a small group and building bigger collaborative structures, partnering with industry to support infrastructure development, and the importance of networking and communication. With regard to scientific funding, peer reviews that accepted the status quo perpetuated the problem of funding science that has low clinical impact and the failure of NIH to recognize the clinical significance of wound healing were identified as significant obstacles. The proposed solutions were to brand wounds as a disease, get a better mix of educated peer reviewers that put more emphasis on innovation and translational approaches, and partner with industry to diversify funding portfolios. The recommendations of the WHS group were to create a list serve for pre-clinical models, create a catalog/clearinghouse of standard operating procedures for pre-clinical models, and to use symposia like this one to promote sharing ideas. Ultimately, as leaders in the field of wound healing research, we must continuously strive to do valid science with high clinical impact and this conference provided some insight on how to do that.
Scenes from the 2012 WHS Conference

New BOD member Barbara Bates-Jensen directing traffic during the OUCH race.

The packed WHS business meeting

The Busy WHS booth

The Preclinical Models of Wound Healing preconference was well attended.

from left: Sabine Erning President of ETRS, Harriett Hopf WHS President and Pat Hebd Editor-in-Chief of WRR

Many enjoyed the WHS Poster Session
The Launch of WHS Journal *Advances in Wound Care: The Meeting Point of Science, Care, and Industry*

*By Chandan Sen, PhD and Editor-in-Chief*

I would like to point out to members again the inaugural issue of *Advances in Wound Care* (http://www.liebertpub.com/wound), a new rapid-publication journal that had its genesis in the book series with that same title. In 2009, the Wound Healing Society decided to address an unmet need by initiating its first book series, aimed at publishing digest articles which would, in simple words and format, present the essence of the latest discoveries to the broader wound care community. The success of that book series inspired the launching of this journal, which retains the same title, but will now be published as an indexed periodical to promote wider dissemination and increase its value. Because of this change, articles will have the immediate benefit of being indexed in Google, Google Scholar, Microsoft Academic Search, and innumerable other search engines. We also expect an early listing by Medline and hope to have an impact factor in a few years’ time. *Advances in Wound Care* is fully NIH-compliant, and has an open access option.

Wounds represent a major and escalating public health problem. *Advances in Wound Care* provides a critical new forum for the field of tissue injury and repair, with an emphasis on acute and chronic wound care to optimize patient outcomes.(1) This journal will enable rapid dissemination of translational research from bench to bedside and back, with wound care applications including chronic wounds (e.g. ulcers), acute wounds (e.g. surgical wounds), burns, trauma, blast injuries, infection, and more. *Advances in Wound Care* will explore novel research approaches and practices to deliver the latest scientific discoveries and developments. Major emphasis will be placed on clinical, observation-based research aimed at solving problems at point of health care delivery.

As an official publication of the Wound Healing Society, *Advances in Wound Care* serves the Society’s core mission of improving wound healing outcomes through science, education, and communication. It will also foster interaction between scientists, clinicians, industry representatives, and government agencies, with the final objective of improving the care of those suffering from wounds. A quantum leap in wound care can only come from effective synchrony between the numerous disciplines that the wound care community represents.

Given the numerous clinical and basic science disciplines involved in developing the science of wound care, this is not a trivial task and calls for a strategic approach. Even for accomplished scientists, staying abreast with the latest developments in the multidimensional science of wound care is a daunting task. For wound care professionals, it is almost impossible to closely monitor relevant scientific developments in such a diverse atmosphere. Thus, there is a fast growing gap between the frontiers of science and the quality of education and patient care. *Advances in Wound Care* is being introduced as a bimonthly periodical to address that gap. The overall objective is to strengthen the interdisciplinary continuum of wound care.

*Advances in Wound Care* will publish five types of articles:

**Critical Reviews:** Articles in this track will address late-breaking science in a focused area relevant to wound healing and care.

**Comprehensive Invited Reviews:** Written by invited authoritative experts, articles in this track will exhaustively review the history, present state, and future opportunities of a given area relevant to wound sciences and care.

**Technological Advances:** This track will cover novel technologies related to wound care product development or wound healing research methodology.

**Discovery Express:** Short original articles of outstanding importance will be accepted (or not, based on peer review) within two weeks of submission

**News and Views:** Covers case observations of extraordinary significance and newsworthy developments in the wound care community. May include: review of patents and other relevant intellectual properties, business of wound care, law, insurance, billing, global issues, ethics, quality control, special considerations, and so on.
While the primary focus is on cutaneous wound sciences, quality articles covering comparative science of other organ and tissue systems will be published as well. Coverage will include skin bioengineering, skin and tissue regeneration, acute, chronic, and complex wounds, dressings, anti-scar strategies, inflammation, burns and healing, biofilm, oxygen and angiogenesis, critical limb ischemia, military wound care, and new devices and technologies.

This inaugural issue has a special focus on the Cell Biology of Wound Healing organized by the legendary Bob Diegelmann, with strong contributions on collagen organization, macrophage polarization, angiogenesis, mast cells, stress, and fibrocytes. In the Technology Reports track, this inaugural issue discusses cutting-edge advances, including articles on the SNaP® Wound Care System, PolyMem® Wic® Silver® Rope, Glycerin-Based Hydrogel for Infection Control, Cascade, and Autologous System Platelet-Rich Fibrin Matrix.

We are fortunate to have an extraordinary international editorial board including experts in the U.S., Canada, Germany, Denmark, Israel, China, Japan, India, and Brazil.

On behalf of the Wound Healing Society, I welcome the larger wound care community to strengthen our intellectual network by contributing to Advances in Wound Care. You may submit articles via http://mc.manuscriptcentral.com/whsycb. Please let us know how we may best serve your needs so that your knowledge may integrate with the rest of the wound care community to guide scientific research and improve patient care.


WRR is published on behalf of Wound Healing Society, Japanese Society for Wound Healing, European Tissue Repair Society, Australian Wound Management Association

Impact Factor: 3.443

Wound Repair and Regeneration provides extensive international coverage of cellular and molecular biology, connective tissue, and biological mediator studies in the field of tissue repair and regeneration and serves a diverse audience of surgeons, plastic surgeons, dermatologists, biochemists, cell biologists, and others.

Research Award: The Wound Healing Society is pleased to offer recognition to deserving young scientists in the wound healing field by offering a Young Investigator Award. The purpose of the Award is to underscore the importance of furthering research in the area of wound healing by recognizing and rewarding top young researchers, and by facilitating the presentation and scientific discussion of new discoveries. Learn more.

Expand your network and knowledge in wound care by joining The Wound Healing Society (WHS), the premier international organization focusing on the clinical and basic science of wound healing. As a member, you’ll be part of an expanding community of physicians, researchers, nurses, clinical investigators, patient care providers, industry representatives, and students dedicated to the field of wound management and tissue repair.

Learn more about the benefits of membership in WHS.

Access Wound Repair and Regeneration’s research faster. Sign up for e-mail table of contents alerts and be the first to know when new research has published.

Why Sign Up?
• It’s Free - you don’t have to have a subscription to receive e-mail table of contents alerts
• Convenient Delivery Format - each alert is delivered straight to your inbox. Read immediately or file to read at your leisure
• User-Friendly - as each issue publishes, you get an at-a-glance listing of new content with direct links to each article
• Saves You Time - e-mail table of contents alerts allow you to keep up-to-date with issues as they publish, saving you valuable research time
• No Commitment - you can opt-out of receiving e-mail table of contents alerts at any time, no questions asked

by Paul Ehrlich, PhD with edits from Elof Eriksson, PhD

In 1996 the 2nd joint meeting of the Wound Healing Society and the European Tissue Repair Society was held in Boston at the Park Plaza Hotel. Also attending and participating in the meeting were members of the Australian Wound Management Association, the Japanese Society for Wound Healing and the Chinese Tissue Repair Society. This was a very large meeting in terms of the number of attendees, 121 platform presentations, 171 posters, and 17 exhibitor booths. The president of Wound Healing Society was Marty Robson, who initiated the Pre-Meeting, Clinical Day.

A Pre-Meeting Clinical Day was held on Wednesday May 15 with Dr. Warren Garner giving the welcoming remarks. Some of the topics presented were: The Basic Biology of Wound Healing, Surgical Care of Wounds, Nutrition, Providing Local Wound Care, Radiation Wounds, Wound Care of HIV Positive Patients, Pressure Ulcers, and Organizing A Wound Clinic.

The wound healing meeting officially opened on Thursday, May 16. The keynote speaker was Dr. Joseph E. Murray, Nobel laureate, whose presentation was titled “Wound Healing: The Essence of Surgery.” This was followed by a panel discussion titled Cell-Stroma Interactions in Wound Healing. Panelists included Professors Wallace H. Clark, Elof Eriksson, Martin E. Hembler, and Donald Ingber of Harvard Medical School. The presentations included human skin and scars; repair in a liquid environment; integrins and associated proteins regulation of cell adhesion and control of angiogenesis by mechanical stress. Appropriately after lunch, wound nutrition was the focus with three presentations. The remainder of the afternoon had four concurrent free paper sessions titled angiogenesis/apoptosis; extracellular matrix; integrins and wound contraction. At 4 p.m., the exhibits opened with happy hour. Also included with the exhibits was the first poster session with topics: Cytokines & Inflammation, Novel Wound Healing Treatments, and Proteases.

Viewing of posters started off the Friday morning meeting. This was followed by the first of six plenary sessions. The focus of the first plenary session was wound debridement with four presentations. After the coffee break, the second plenary session began with the topic of Standard of Care Protocols and Clinical Research. Following the morning session, scar management was the theme of the Luncheon Forum. The talks included The Problem, Clinical Approach, Keloids and What’s on the Horizon. Following the Luncheon Forum, the second concurrent session of free papers opened that covered four topics: Cytokines & Inflammation, Novel Wound Healing Treatments, Scars & Keloids and Wound Care & Assessments. The Wound Healing Society’s business meeting preceded the Dinner Reception: A Taste of Boston that evening.

On Saturday morning, the meeting started out with the second poster session, followed by the third plenary session titled Wound Healing: Pushing Back the Frontiers. Talks included limb regeneration; the effects of age on healing; healing in mice lacking the plasminogen gene; the development of collagen fibers from collagen fibrils and the role of the KGF in wound healing. After the morning coffee break, the third plenary session began with extracellular matrix molecules in wounds, chronic wounds, cytokine in acute & chronic wounds; growth factor in acute & chronic wounds and wound pharmacology. Following the “on your own” lunch break, the third concurrent session of free papers began with topics of growth factors, proteases and tissue substitutes.

continued page 18
WHS Committee Reports

Awards
Kenneth Liechty, MD, Chair
The Awards Committee has met twice since the annual meeting. We have been formalizing the award criteria. We have also been targeting ways to improve the base of awardees to include an increased profile for our veterinary members. We have also increased the award to our young investigators to include a year’s membership to the WHS. We have also been discussing ways to better disseminate our call for nominations for distinguished service.

Education
Arti B. Masturzo, MD, Chair
The Education Committee has been busy since our meeting in April. We have put together a task force/subcommittee to publish a white paper describing various certifications for physicians, RNs, and PT’s (Physical Therapists) and the confusion that surrounds them. We are also working actively to present a wound care basics course to the AGS (American Geriatric Society). We have also on our work list the task of refreshing and reenergizing our basics course for SAWC/WHS in the Spring, and are putting out a podcast in July. We have worked closely with others on WHS to determine how to distribute, market, and charge for the podcast.

Government Relations
Robert S. Kirsner, MD, PhD, Chair
The WHS Government Relations Committee is focused on a long-term goal of increasing NIH funding in wound care. The first part of this effort is to better understand the current funding status for wound care across NIH institutes. We will study the NIH funding pattern over several years, the number of projects funded and their overall dollar amount along with the number of RFAs and number of investigators funded by the NIH. In order to accomplish this goal, a uniform set of search terms needs to be established so that future efforts will not be biased by a different set of search terms. We will also develop a uniform approach to accessing the data. If any WHS member is interested in participating, please feel free to contact me at: RKirsner@med.miami.edu.

Guidelines Committee
Robert Kirsner, MD, PhD, Chair
The WHS is planning to update our guidelines. As most of you know, we currently have guidelines on treatment of Acute and Chronic Wounds (Venous Ulcers, Pressure Ulcers, Diabetic Foot Ulcers, and Arterial Ulcers), as well as guidelines for the prevention of each of the four common chronic wounds. Since their release over a half a decade ago, new information has been published. The first revision will be completed in 2013.

Pressure Ulcer Guideline revisions are being led by Gayle Gordillo, MD; Arterial Ulcer Guideline revisions led by Daniel Federman, MD; Diabetic Foot Ulcer Guidelines revisions led by Larry Lavery, DPM, and co-chaired by David Margolis, MD, PhD; and the Venous Ulcer guidelines revisions are being led by Bill Marston, MD. We envision that each task force will create technical reports of new research since release of the prior guidelines. As an example, the report for the Venous Ulcer Guidelines were just published online (soon in print in Wound Repair and Regeneration). (Tang JC, Marston WA, Kirsner RS Wound Healing Society (WHS) venous ulcer treatment guidelines: What’s new in five years? Wound Repair Regen. 2012 Jul 16. doi: 10.1111/j.1524-475X.2012.00815.x. [Epub ahead of print])

If you are interested in being part of the task force, please contact either the task force leaders for the specific areas or me at rkirsner@med.miami.edu. The hope is to present the draft guidelines at the annual meeting for comment.

Program Committee
Sashwati Roy, PhD
Aamir Siddiqui, MD, FACS, Co-chairs
The Program Committee is excited to announce the 25th Anniversary of the WHS at its annual meeting from May 1-5, 2013. Come celebrate with us in Denver. This year’s meeting promises to be an intimate gathering at an international forum. Sessions and panels have been planned to reflect member input.

continued next page
In addition, this year we are implementing a unique format where we will have a day and a half of WHS-only sessions for our members to discuss intense cutting-edge science and advances in wound research. Then we will join in with the SAWC and WHS will have its usual track. In addition, this year the Wound Healing Society Foundation has initiated an annual Thomas K. Hunt Endowed Lectureship. The opening lecture on day one will provide a brief historical perspective on wound research followed by discussion on current science from the presenter’s laboratory.

Plenary sessions will cover basic sciences and clinical aspects of selected hot topic areas highlighting advances in the areas of inflammation, abnormal healing and infectious pathophysiology, biofilms, and Omics technologies. The keynote lecture with SAWC will present a simplified digest of wound healing and regenerative strategies. miRNA will be the theme for the SAWC/WHS general session. MicroRNAs (miRNAs) are small non-coding RNAs that hold tremendous therapeutic potential in regenerative tissue repair.

Mini-symposia sessions will be selected from the most meritorious abstracts based on peer review of all of the submitted abstracts. These sessions will present the latest research findings relevant to wound healing and care.

A new session on the “Excellence in Translational Regenerative Science Award” has been introduced this year, in which top abstracts from investigators involved in cutting edge research fostering the development of cell-based and other therapies in wound healing and regenerative medicine toward clinical applicability will be presented. The top abstracts for this session, will be selected by the Awards Committee based on peer review of the abstracts and 100-word write-up requested for this category. We are excited that our joint session this year will be with the Society of Investigative Dermatology. Finally, as a part of our 25th Anniversary celebration, we will end the program with special short presentations from luminaries in the field that will highlight major advances in wound research in the past 25 years.

At the meeting, meet old friends and make new ones. Follow details on our website or via Facebook, LinkedIn or Twitter. For those interested in participating in the planning of the meeting, please consider being an abstract reviewer. There is a time commitment and some training, but it’s a great way to learn how our Society works. For details, please contact Mindy at mindy@crowsegal.com.

Publications

Luisa DiPietro, DDS, PhD, Chair

The Publications Committee has been repopulated to match the composition outlined in the WHS Bylaws, and we are now nearly at full strength. The Committee still needs to add one additional WHS member along with 2 ETRS members to be nominated by the ETRS. 2012-13 members include: Luisa DiPietro, Chair; Sadanori Akita; Geoff Gurtner, Kris Kieswetter, Tim Koh, Marco Romanelli, Tai-Lan Tuan, Chandan Sen (Ex-Officio), Pat Hebda (Ex-Officio), Bob Diegelmann, (Ex-Officio).

The Publications Committee met on July 23, 2012. We heard from the Editors in Chief of both WHS publications, Dr. Pat Hebda, EIC of Wound Repair and Regeneration, and Dr. Chandan Sen, EIC of Advances in Wound Care. The committee discussed the interaction of the two publications, and agreed that due to the differences in focus, they are likely to complement one another rather than compete.

We have several action items for the upcoming year, including becoming a fully populated committee, learning more about how each publication functions, including the review and publication process, and examining the proposed plan to appoint a Deputy Editor for WRR. Comments and suggestions on the journals are welcome, and can be sent to the committee chair, Luisa DiPietro at Ldipiet@uic.edu.
At the same time, a clinical session titled “Noninvasive Methods of Wound Assessment” topped off the day’s meeting.

Sunday, the last day of the meeting, started off with plenary session number five, entitled “Dermal and Epidermal Substitutes,” when at the time artificial skin was a hot topic, particularly in Boston. The topics included the use of cultured epithelial grafting of chronic wounds; the clinical application of cultured epidermal graphs and composite skin replacement. After the coffee break, plenary session six began, entitled Controversies in Wound Care. This was one of the more interesting sessions, with talks on Hyperbaric Oxygen: Fact or Fiction; Interactive Dressings; Integrins & Matrix, and Electrical Stimulation of Healing: Wizards & Gremlins.

The 1996 meeting contained cutting-edge presentations in both clinical and scientific research that was pursued on four continents. Australians, Japanese, Chinese, and Europeans actively participated in the meeting. Another new wrinkle to the Wound Society meetings at that time was the pre-meeting Clinical Day. The meeting also introduced topics that were new for the Wound Healing Society’s annual meeting. The meeting’s setting in historic Boston, with a Nobel laureate presenting the keynote address, contributed to the meeting’s success.
The Wound Biotechnology Foundation (WBF) has as its primary mission the promotion of educational and research activities aimed at advances in tissue repair, wound healing, and regeneration. These activities are based on the belief that, ultimately, major advances in science and biotechnology will overcome the necessity for the standard wound care steps presently accepted and necessary to offset failure to heal.
The second edition of the critically acclaimed *Text Atlas of Wound Management* presents new features for dermatologists and nurses who deal with the practical and clinical aspects of wound management.

Expert contributors provide a hands-on approach to diagnosis and wound management, as well as a broad exposure to cutaneous wounds—both acute and chronic—to ensure complete exposure to the problems encountered and solutions offered.

This colorful guide enables the reader to feel as though he or she is analyzing wounds alongside the experts.

In an updated format and with new additional features, it includes chapters on:

- Acute wounds: response to injury
- Surgery
- Chronic wounds: Histopathology
- Pressure and neuropathy
- Vascular ulcers
- Inflammatory ulcers
- Neoplasms and ulcers
- Practical points

**SPECIAL RATE:**
$180.00 USD / £90.00 GBP

**NORMAL PRICE:** $200.00 USD / £100.00 GBP

ISBN: 9780415468657
March 2012 • Page extent: 352 pages
Format: Softcover • Size: 246 x 189mm
550 Colour Illustrations

**ALSO AVAILABLE as an ebook to order online**
eISBN: 9781841848785

For more information about this book visit [www.informahealthcarebooks.com](http://www.informahealthcarebooks.com)
We are a leading global medical technology company devoted to the discovery, development, manufacture and marketing of innovative, high-technology therapies and products for the wound care, tissue regeneration and therapeutic support system markets. Our history is deeply rooted in the innovation and passion of improving the healing and the lives of patients around the world.

www.kci1.com
Engineered for Comfort

3M™ Coban™ 2 Layer Compression Therapy Systems
Designed with Intelligent Compression Dynamics

3M engineered Coban 2 Layer Compression Therapy Systems to deliver comfortable, sustained, therapeutic compression for patients of all sizes, shapes and lifestyles.

Have you heard the news? Effective January 2010, the AMA established a new CPT® Code for Multi-Layer Compression Systems. You now have the opportunity to bill this code when you apply Coban 2 Layer Systems.

For more information about Coban 2 Layer Compression Therapy Systems, or reimbursement under the new CPT® code, contact your 3M Skin and Wound Care Sales Representative, call 1-800-228-3957 or visit:

www.3M.com/Coban2Layer/3

New: 3M™ Coban™ 2 Layer Lite Compression System
Safe, comfortable and therapeutically effective for patients who:
• Have mixed etiology with an ABPI greater than or equal to 0.5
• Are new to compression, or where tolerance is not known
• Are frail
• Are less mobile

©3M 2010. All Rights Reserved. 3M and Coban are trademarks of 3M.