

Re-Engineering Engineering Education

BIOMATERIALS FORUM



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**Committee Updates
and Member News**



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BIOMATERIALS FORUM



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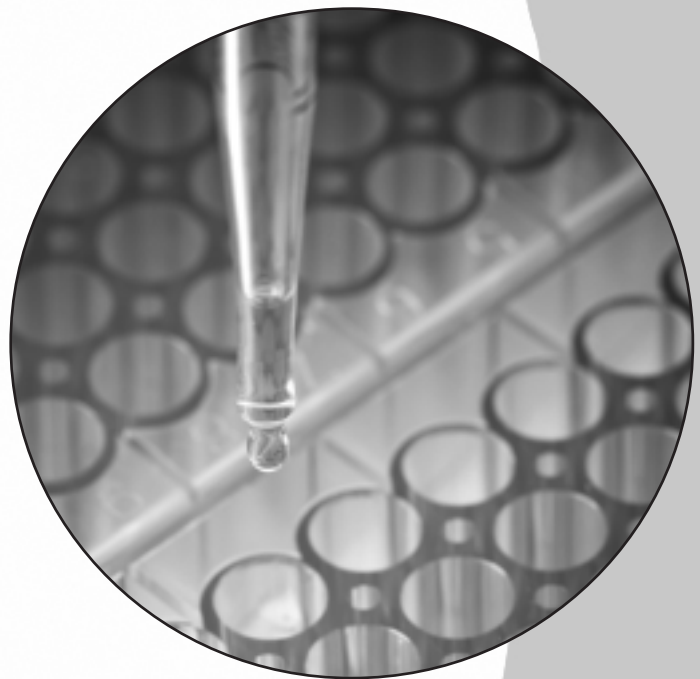
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I thoroughly enjoyed the keynote speaker's talk at the recent SFB annual meeting. It is refreshing to hear a challenge call from a practitioner. Dr. Palmaz highlighted the initial design of the stent more than 20 years ago and questioned the seemingly incremental movement forward since that time,

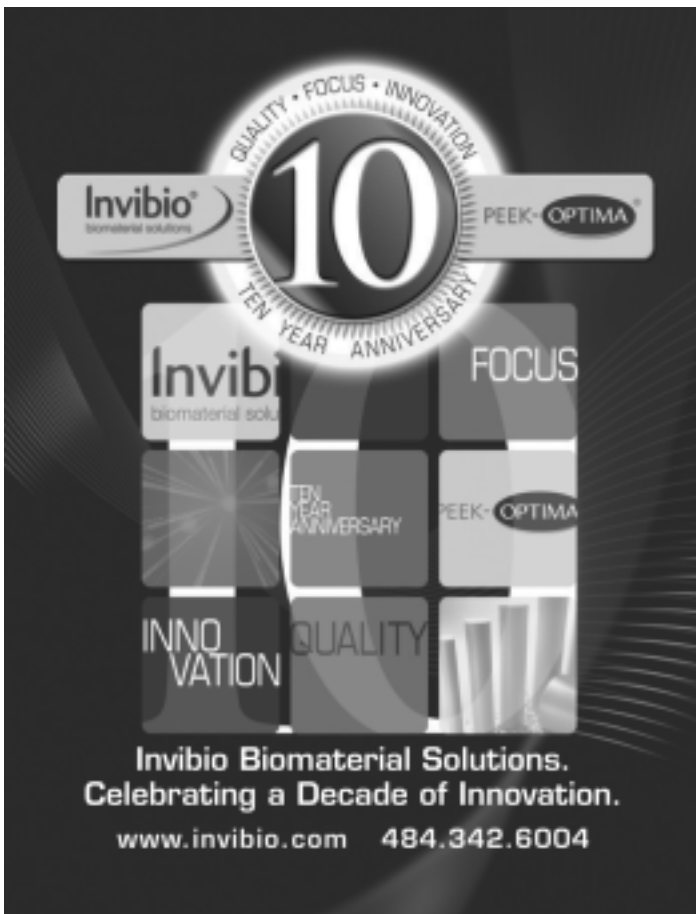
citing the subsequent leap in interest to absorbable materials as one potential reason for the low rate of motion toward an improved clinical device. He posed the question, given the lessons learned with the metallic devices and the enormous potential for further work, given our understanding of foreign body response, given the tissue damage at a stent site, why would an absorbable material have any better chance of stimulating new and normal tissue growth? Given that line of thinking, why implant anything at all—why not assume the tissue will eventually self repair?

My own opinion regarding the cycle of research is there is lack of interest in the seemingly “mundane” and much higher interest and news splash related to that big, new idea. The hype cycle seems to aptly describe this point—who wouldn't want to be associated with the Technology Trigger? Certainly, the Trough of Disillusionment is a challenging, often infeasible, place for any researcher to exist. Interestingly, the methodological studies, which are crucial to success, are not photo-friendly for cover page viewing, nor do they stand out in

a funding review panel. Research seems to jump from fad to fad, from new big idea to new big idea, never truly refining to the point of complete clinical success. Of course, some would argue this is where a company should take over and finish the development. However, I would suggest we are leaving too big a gap. The companies are not able to commit to long horizon projects, and we are missing the lessons learned from exploring the details. Perhaps it is due to our rewards system where perceived rewards to researchers often include promotion, tenure, funding, notoriety and awards. Value to society alone is rarely included. I remember distinctly as a new professor being told by a senior colleague my methodology focused research, while sound engineering, was of little importance and would not serve me well in my career path. I remember disagreeing and wondering to myself where biomaterials research would be without the many existing assays, instruments and standard operating procedures. I liken the start of a new research topic to the framing of a new house. The breaking of ground and rapid visual progress is exciting—the size, the shape, the layout. But once the excitement of the new has passed, the house details must be completed for occupancy. For the passerby, the selection of plumbing or electrical details is of far lower interest than the initial, superficial facade. Yet these details are crucial to building a quality house. Similarly, in research, we must refine, fill in the blanks, ask the less eye-catching questions—e.g., should an engineered tissue be fully developed prior to implantation? To what degree does the percent of a specific composite filler affect its long term biocompatibility? Does a two-degree temperature difference provide sterilization benefit for a particular device? I postulate these seemingly mundane questions will provide the path for exciting, innovative ideas to become clinical realities and clinical successes. I would also suggest the idea of innovation is hollow unless we have a deep understanding of the problems, past solutions and limitations of past solutions that come from examining the mundane. I believe we need to admit that we, as researchers, are a diverse population, and, just as a team needs leaders, followers and facilitators, so, too, does the research world need framers as well as plumbers and electricians. Our perceived rewards system seems to suggest to newly budding biomaterialists that success is only found in framing. I would suggest otherwise.

Best wishes from Clemson,

*Karen J.L. Burg
Hunter Endowed Chair & Professor of Bioengineering
Interim Vice Provost for Research & Innovation
Clemson University*



From the President

The Torch
By Jeffrey A. Hubbell

State of the Society



At the end of my period as president, I would like to share my thoughts on the state of the Society, both its intellectual health at the moment and the direction the Society has taken. One hallmark of the Society has been innovative materials science combined with solid basic and applied biology. The strength of the society in biological investigation has grown tremendously during the past several years, so now truly excellent cell and

molecular biology, applied in morphogenesis, tissue repair and immunomodulation, for example, is being presented in the meetings and published in the Society's journals. Much biological depth is now understood at the implant-tissue interface. In the past few years, we have made concerted efforts to fortify the materials science leg of the society, to increase our programming and publication of the most novel and creative molecular and materials designs in polymers, ceramics and metals spanning from the nano to the macro. This has been partially successful, yet the Society continues to invest more of its energies into this aspect. Next year's Annual Meeting will, in particular, highlight designs of novel molecules, materials and

processes enabling new biological investigation and clinical intervention. A second hallmark of the Society has been its span from molecular design to clinical evaluation and use, accompanied by enthusiastic participation of chemists, materials scientists and biologists as well as clinicians. With regard to the latter, the Society is redoubling its efforts to increase the attractiveness of its meetings programming to clinicians, to increase their participation. In a time of increasing demands on these members and guests for their clinical time, this is a difficult challenge, but with the Society's science at a high level, we are up to the task. With the new leadership of Lynne Jones and her team, we are in good hands!

Jeffrey A. Hubbell

Community Calendar

TERMIS 2nd World Congress

Seoul, South Korea
August 31-September 3, 2009
www.termis.org/wc2009

European Society for Biomaterials 2009

September 7-11, 2009
Lausanne, Switzerland
www.esb2009.org

35th Annual National Society for Histotechnology Symposium/Convention

October 2-7, 2009
Birmingham, Alabama
www.nsh.org

Biomedical Engineering Society 2009 Meeting

Pittsburgh, Pa.
October 7-10, 2009
www.bmes.org

International Bone-Tissue-Engineering Congress

Hannover, Germany
October 8-11, 2009
www.bone-tec.com

Advances in Tissue Engineering

Rice University

**Center for Excellence in Tissue Engineering,
Institute of Biosciences and Bioengineering,
Department of Bioengineering**

Houston, Texas

August 12 - 15, 2009

Seventeenth annual short course with leading scientists from Rice University, the Texas Medical Center, industry, and other institutions on advances in the science and technology of tissue engineering. Be informed on the latest technology in the world of patient-specific therapeutics, from transplantation of cells and tissues to artificial organs.

For biomaterialists, biomedical engineers, physicians, technical managers, and others involved in research in the areas of:

- Stem cell biology
- Cell & tissue culture
- Applied immunology
- Drug delivery & targeting
- Organ & cell transplantation
- Vascular surgery & medicine
- Orthopaedic surgery
- Plastic surgery
- Reconstructive surgery
- Gene therapy
- Nanobiotechnology



RICE

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The Society For Biomaterials 2009 Annual meeting in San Antonio, Texas, was host to more than 1,000 biomaterial scientists, with more than 700 abstracts presented. Four Rapid Fire sessions, a new session format for the Annual Meeting, were well received, with lessons learned about the need to keep those sessions on a tight schedule. In addition, to ensure a vigorous program, the meeting format included concurrently scheduled sessions of varying formats. The 2009 Bash was held at the Institute for Texan Cultures and offered a great opportunity to socialize with new colleagues and old friends. A complete set of the meeting's evaluation survey results is available on the SFB Web site in the Members Only section.

The 2009 Annual Business Meeting was held during the meeting. Jeffrey Hubbell highlighted some of the major structural changes taking place within the editorial offices at the *Journal of Biomedical Research Part A and Part B - Applied Biomaterials*. Perhaps the biggest change is after 23 years of dedicated service, Harold Alexander will be stepping down as Editor in Chief of *JBMR-B*. Jeremy Gilbert has been selected as his replacement. Efforts are underway to reduce the time to publication for manuscripts submitted to Parts A and B, and to clear a print publication backlog. These combined efforts are aimed at improving the *Journals'* impact factors. Alan Litsky reported the Society's long-term reserves, while taking a slight hit in the markets recently, are healthy overall, losing just 10 percent of their total value in 2008, due in large part to a very conservative investment policy. Results of the 2009 election were also announced, and the following individuals have been elected to serve on the Society For Biomaterials Board of Directors: 2009-2010 President-Elect: Jeremy Gilbert, PhD, Syracuse University; 2009-2011 Secretary/Treasurer-Elect, Laura Suggs, PhD, University of Texas at Austin; 2009-2010 Member-At-Large, Michele Marcolongo, PhD, Drexel University.

Committee Reporting: Each of the Society's newly elected or appointed committee members are listed below, along with the goals each committee would like to accomplish during their year term.

- **Awards, Ceremonies and Nominations Committee** members include: Jack Lemons, University of Alabama at Birmingham (Chair); David Castner, University of Washington; Liisa Kuhn, University of Connecticut; Robert Latour, Clemson University; and Krishnendu Roy, University of Texas at Austin. The goals of the 2009-2010 Committee are to solicit and evaluate nominees for the Society's awards and officers, present Council with recommended candidates for 2010 Awards and officers and present a slate of officers to the membership for election in 2010.
- **Bylaws Committee** members include: Lisa Friis, University of Kansas (Chair); Angela Au, Nutramax Laboratories; Joel Bumgardner, University of Memphis; Tim Topoleski, University of Maryland Baltimore County; and Horst Von Recum, Case Western Reserve University. The goals of the 2009-2010 Committee are to consider and report on questions and problems arising with respect to the bylaws of the corporation and make

recommendations for revisions to the Council. In addition, the committee will consider revising Article IX on the Special Interest Groups in its entirety.

- **Devices and Materials Committee** members include: Gabriele G. Niederauer, ENTrigue Surgical (Chair); Jeremy L. Gilbert, Syracuse University; Kristine Kieswetter, Kinetic Concepts; Paul Spencer, Surmodics Pharmaceuticals, Inc.; and Warren O. Haggard, University of Memphis. In 2009-2010 the Devices and Materials Committee will focus on four objectives: establishing an industry advisory board to assist with setting programs to meet the needs for corporate professional and leadership development; creating an exhibitor/sponsor consultative group to provide input on meeting exhibits and similar venues; providing input to the Liaison Committee on representatives to standards organizations such as ASTM and ISO; and developing programs for the annual meeting to provide clinical relevance to biomaterials product development.
- **Education and Professional Development Committee** members include: David Kohn, University of Michigan (Chair); Joel Bumgardner, University of Memphis; Alan Litsky, Ohio State University; Shane Woods, Synthes; and Margaret Phillips, University of Texas (National Student Chapter President). The goals of the 2009-2010 Committee are to provide advice to the Student Chapter leadership, establish Biomaterials Days throughout different regions within the country; develop a new Webinar/Webcast series, evaluate endorsement requests from other organizations, update the Web site regarding Educational and Professional Development, investigate leadership programs for our young investigators and establish a mentorship program for the Society.
- **The Finance Committee** members include: Laura J. Suggs, University of Texas at Austin (Chair); John P. Fisher, University of Maryland; Alan S. Litsky, Ohio State University; Antonios G. Mikos, Rice University; and Johnna Temenoff, Georgia Institute of Technology. It is the immediate goal of this committee to oversee the Society's investments and maintain a healthy long-term portfolio in today's economic environment. We will be working with the current leadership to prepare the budget and address detailed budget items for the coming year. Our priorities are on the success of our annual meeting, the productive relationship with our publishing partner, Wiley, and on recruiting and maintaining active society sponsors.
- **Liaison Committee** members include: Molly Shoichet, University of Toronto (Chair); Kristi Anseth, University of Colorado; Kevin Healy, University of California, Berkeley; and William Wagner, University of Pittsburgh. Goals of the 2009-2010 Committee include interacting with the 2012 WBC Organizing Committees on programmatic and organizational matters and identifying opportunities for collaboration with the ORS, MRS, BMES and other organizations at the Society's Annual Meeting and throughout the year.

- **Long Range Planning Committee** members include: Jeremy Gilbert, Syracuse University (Chair); Helen Lu, Columbia University; Guillermo Ameer, Northwestern University; Bob Hastings, Depuy Orthopedics; Joel Collier, University of Chicago; and Michelle Marcolongo, Drexel University. The goals of the 2007-2008 Committee are to advise and consider recommendations to the Council regarding the long-range direction and future of the Society.
- **Meetings Committee** members include: Lynne Jones, Johns Hopkins University (Chair); Karen Burg, Clemson University; Alastair Clemow, Nexgen Spine; Phil Messersmith, Northwestern University; Antonios Mikos, Rice University; and Buddy Ratner, University of Washington. The goals of the 2009-2010 Committee are to analyze 2009 annual meeting survey data, evaluate venues for future meetings and social events, work with the Liaison, Membership and Education and Professional Development Committees and SIGs to investigate the potential of meetings co-localized with other societies, assess the funding and sponsorship revenue of our annual meetings and to provide recommendations for increasing these sources of revenue to better offset meeting attendee registration costs, establish and/or update guidelines for Program Chairs in order to provide continuity from year to year, propose the format and venue of the meeting to be held during the World Congress Year and explore the possibility of a service project to be held in the host city.
- **Membership Committee** members include: Nicholas Ziats, Case Western Research University (Chair); Robert Hastings, DePuy; Helen Lu, Columbia University; Jiro

Nagotomi, Clemson University; and Christopher Seidlecki, Pennsylvania State University. The goals of the 2009-2010 Committee are to continue initiatives to increase membership, re-invigorate existing Student Chapters and establish new ones and work with Education and Liaison Committees to further collaborative programming with other societies.

- **Presidents Advisory Committee** comprises all past presidents of the Society and is chaired by the Immediate Past President Jeffrey Hubbell. The goals of the 2009-2010 Committee are to continue revising editorial processes within each journal, represent SFB in AIMBE and the IUSBSE, provide input to the Meetings Committee on sponsorship, provide input to the Program Committee on the annual meeting program content, provide input on leadership programs (mentorship and scholarship programs) and continue development on a Code of Ethics for the Society.
- **Program Committee** members include: Phil Messersmith, Northwestern University (Chair); Karen Burg, Clemson University; Joel Collier, University of Chicago; Lara Gamble, University of Washington; Lori Henderson, National Institute of Biomedical Imaging and Bioengineering; Lynne Jones, Johns Hopkins University; William Murphy, University of Wisconsin; Lawrence Salvati, DePuy Orthopedics; and Christopher Siedlecki, Pennsylvania State University. The goal of the 2010 Committee is to develop the scientific program for the 2010 Annual Meeting.
- **Publications Committee** members include: Ashutosh Chilkoti, Duke University (Chair); David Grainger, University of Utah; Syed Hossainy, Abbott Vascular; John Ricci, New York University; and the editors of the Society's publications: James Anderson, Case Western Reserve University (JBMR-A); Jeremy Gilbert, Syracuse University (JBMR-B); Karen Burg, Clemson University (Biomaterials Forum); and Thomas Webster, Brown University (Web site.) The goals of the 2009-2010 Committee are to continue development of revised editorial processes within each journal and develop a strategic plan to reduce the backlog of articles in the pipeline; to identify the senior editor of the forthcoming book series and to determine the mechanism of identifying editors for each book in the series.

If you are interested in knowing more about a particular issue, policy or committee activity, or if you have any suggestions for improved membership services, please contact me directly at the SFB headquarters office.

Sincerely,



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CALL FOR NOMINATIONS

The Society For Biomaterials is soliciting nominations for the 2010 Awards listed below, and for the following Board of Directors positions:

- President-Elect
- Member-At-Large

2010 Awards:

Founders Award
C. William Hall Award
Clemson Award for Applied Research
Clemson Award for Basic Research
Clemson Award for Contributions to Literature
Technology Innovation and Development Award
Young Investigator Award
Student Awards for Outstanding Research
Outstanding Research by a Hospital Intern, Resident, or Clinical Fellow Award

To nominate a colleague or yourself for an award or position on the SFB Board of Directors, please visit the SFB Web site at:

www.biomaterials.org

The Torch

By Guigen Zhang,
University and Research
Institution News
Contributing Editor

A Once-in-a-Lifetime Opportunity to Re-Engineer Engineering Education

I read with despair a report by Scott Jaschik in *Inside Higher Ed* (March 30, 2009) "PhD Admission Shrinkage." In case you have not read it, I refer you to www.insiderhighered.com.

I just hope the Obama administration will, in the midst of saving banks and others, stop this shrinking trend quickly. Yes, of course, it is not quantity that matters, it is quality. But to get the quality we desire, very often we need to have the quantity in the first place. After all, as long as these new PhDs are prepared to innovate for the future and create the demand side themselves, why should we worry about the supply side?

Introducing the 2009-2010 National Student Chapter Officers



Welcome to the 2009-2010 student officers!

Pictured from left to right are President Margaret Phillips (University of Texas at Austin), President-Elect Heather Doty (University of Memphis), By-Laws Chair Daniel Alge (Purdue University) and Secretary/Treasurer Kara Spiller (Drexel University). Not pictured is Secretary/Treasurer-Elect Kristen Moffat (Columbia University).

Book Review

By Liisa Kuhn

Career Development in Bioengineering and Biotechnology

Edited by G. Madhavan, B. Oakley, L. Kun

Copyright 2008, Springer, 485 pages, paperback,
used and new from \$23.
ISBN-10: 0387764941

Description and review

As a faculty member interested in advising my students about biomedical engineering career choices and also interested in developing a biomaterials curriculum within our biomedical engineering program, I have found this book to be very helpful, and, thus, I recommend it. The book is split into five different parts.

Part I, "An Introduction to Bioengineering and Biotechnology," defines the differences between bioengineering/biomedical engineering and biotechnology and includes survey results for core curriculum components for both fields. In case you were wondering, biomaterials falls under biomedical engineering for the most part. Part II, "Traditional Careers in Bioengineering and Biotechnology," covers academic, industrial, government, intellectual property law and entrepreneurial career possibilities. One might think this covers most of the possibilities, but the book goes on. Part III, "Innovative Alternative Careers in Bioengineering and Biotechnology," describes career opportunities in the finance and investment industry, clinical research careers, energy, forensics, technology and management consulting and sports engineering. Part IV, "Career Development and Success Strategies," is a valuable section about personal-life stories told by a variety of bioengineering professionals. Part V, "Growth and Responsibilities Beyond the Profession," speaks to social responsibility, leadership development, patient safety and ethics.

This is not only a resource for the student just beginning in the field, but also for those professionals who may now be forced to look into alternative career options due to a layoff or laboratory downsizing. The material is not dry, but quite interesting because it includes personal experiences shared by both new and old members of the bioengineering community. It is an outstanding resource and invaluable reference. Highly recommended.



Congratulations to:

Kristi S. Anseth, Distinguished Professor and Howard Hughes Medical Institute Investigator, Department of Chemical and Biological Engineering, University of Colorado at Boulder, who was elected to the National Academy of Engineering. Dr. Anseth was recognized for pioneering the rational design of biomaterials for tissue engineering, drug delivery and biosensing applications.

Arthur J. Coury, of Coury Consulting in Boston, who was elected to the National Academy of Engineering. Dr. Coury was recognized for his many contributions to design and commercialization of pacemakers, biodegradable biomaterials and implantable devices. Dr. Coury has made special efforts to enthruse students and new research scientists in biomaterials research.

Drs. Anseth and Coury are among 65 new members of the National Academy of Engineering (NAE). Election to the NAE is among the highest professional distinctions accorded to an engineer. Academy membership honors those who have made outstanding contributions to "engineering research, practice or education, including, where appropriate, significant contributions to the engineering literature," and to the "pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering or developing/implementing innovative approaches to engineering education."

Kristi S. Anseth, Distinguished Professor and Howard Hughes Medical Institute Investigator, Department of Chemical and Biological Engineering, University of Colorado at Boulder and **Antonio Mikos**, J.W. Cox Professor of Bioengineering and Professor of Chemical and Biomolecular Engineering at Rice University, who have been elected Fellows of the Materials Research Society. This prestigious designation recognizes individuals who have made seminal contributions to materials science. The title of MRS Fellow honors MRS members who are notable for their distinguished research accomplishments and their outstanding contributions to the advancement of materials research worldwide.

Rena Bizios, Professor of Bioengineering, Department of University of Texas at San Antonio, who received the 2009 Distinguished Scientist Award of the Houston Society for Engineering in Medicine and Biology. Dr. Bizios was recognized for pioneering contribution in cellular engineering, cell/polymer interactions and surface modification of novel biomaterials.

Martine LaBerge, Professor and Chair of Bioengineering, Clemson University, who received the 2009 Governor's Award for Science Awareness. Dr. LaBerge was recognized for her continued efforts in establishing and developing collaborative bioengineering initiatives across the state of South Carolina. The Governor's award honors individuals or teams in South Carolina whose achievements and contributions to science merit special recognition and promote wider awareness of the quality and extent of scientific activity.

Buddy Ratner, Professor of Bioengineering and Chemical Engineering, University of Washington, who is the recipient of the 2009 Acta Biomaterialia Gold Medal Award. The Award recognizes excellence in research and practice of biomaterials; Dr. Ratner was selected for this award for his seminal explorations of biosurface and biomaterials/tissue interactions. Dr. Ratner will receive the award at the 2009 meeting of the European Society for Biomaterials.

Xuejun Wen, Associate Professor of Bioengineering, Clemson University, who received the Clemson University Sigma Xi Young Investigator award, recognizing his contributions to the field of regenerative medicine. Sigma Xi, The Scientific Research Society, is the honor society of scientists and engineers whose mission is to enhance the health of research, foster integrity in science and engineering and promote the public's understanding of science for the purpose of improving the human condition.

Student News

Update from the University of Memphis SFB Chapter



The SFB student chapter at the University of Memphis has been very active over the past few semesters. Recently we had great success with our Entrepreneurship Lecture Series. We invited guests to visit and to speak about patents, intellectual property, venture capitalism, business start-up and the life challenges of working for a start-up company. Both graduate and undergraduate students showed a lot of interest in this topic, and news spread to the Business School, where they have adopted a similar lecture series. The student club also had a blast hosting the 3rd Annual Kickball Social and BBQ. After enjoying some delicious Memphis BBQ, teams set out to win the coveted kickball champions title. This was a great opportunity for students to socialize as well as interact with their professors. We were excited that 13 of our student members attended the SFB annual meeting in San Antonio, Texas, this year. We presented 11 posters, and one won the Student Award for Outstanding Research for Masters Candidate. Way to go, Ben Reves! We had a great time at the annual conference, and we look forward to attending next year in Seattle. Thanks to our advisors and to the University of Memphis for helping us make the trip.

Boston Scientific Corp. (Natick, Mass.) announced the Court of Appeals for the Federal Circuit issued a decision in the Company's stent litigation with Johnson and Johnson (J&J). The Court of Appeals upheld the District Court's decision that JNJ's Bx Velocity and Cypher Stent Systems infringe Boston Scientific's patent and the patent is valid. The Appeals Court reversed the District Court with respect to the TAXUS Liberte Stent and instructed the District Court to dismiss with prejudice the infringement claims against the TAXUS Liberte Stent. The Court of Appeals affirmed the District Court's ruling Boston Scientific's Express, TAXUS Express and Liberte Stents infringe one J&J patent and the patent is valid. The Court also affirmed Boston Scientific's Liberte Stent infringes a second J&J patent and the patent is valid.

GE (Fairfield, Conn.) and Intel Corp. (Santa Clara, Calif.) announced an alliance to market and develop home-based health technologies to help seniors live independently and patients with chronic conditions manage their care from the comfort of their home or wherever they choose. With the dramatic increase of people with chronic conditions and an aging population, there is a need to extend care from the hospital to the home. The market for tele-health and home health monitoring is predicted to grow from \$3 billion in 2009 to an estimated \$7.7 billion by 2012.

CardioNet Inc. (Conshohocken, Pa.), a wireless medical technology company agreed to buy Biotel, Inc. (Eagan, Minn.) for \$14 million. The deal will allow CardioNet to expand into the cardiac clinical-research services business. The acquisition of Biotel expands CardioNet's existing cardiac arrhythmia monitoring business with an experienced design and development team, as well as providing state-of-the-art manufacturing capabilities. As part of the acquisition, CardioNet is buying Biotel's wholly owned subsidiary, Agility Centralized Research Services of Chicago, which provides ECG monitoring services to the medical device and pharmaceutical industries, and to contract research and academic research organizations worldwide.

A Food and Drug Administration panel voted six to one in recommending the FDA should not approve a **Stryker Corp. (Kalamazoo, Mich.)** spinal device, known as OP-1 putty, which is currently on the market for use in a small group of patients for whom previous spine surgeries have failed. Most panel members said the main clinical trial comparing use of the putty to another procedure did not show the putty was equally as good. The FDA had raised several concerns about the product in background memos prepared for the meeting, including the manufacturing of the protein used in the product and patients' immune responses to it. The agency also said the main clinical study comparing OP-1 putty in patients undergoing surgery with autograft showed those receiving autograft did better.

ZOLL Medical Corp. (Chelmsford, Mass.), a manufacturer of resuscitation devices and related software solutions, has initiated a voluntary worldwide field corrective action on its ZOLL AED Plus® automated external defibrillator. The company has determined that some batteries do not work

properly when used with AED Plus defibrillators manufactured prior to February 12, 2009. In addition, the version of the AED Plus self-test software installed in these devices does not adequately detect defective batteries. As a result of these two issues, the AED Plus defibrillator may fail to deliver defibrillation shocks during treatment of sudden cardiac arrest.

A jury in Chicago has found two **Johnson & Johnson** subsidiaries liable in the death of 38-year-old Janice DiCosolo of Cicero, Ill., a mother of three, who died while using a Duragesic(R) patch, and ordered the companies to pay her family \$16,560,000. When Mrs. DiCosolo died February 15, 2004, she was using a Duragesic patch her doctor prescribed to reduce the almost constant pain she experienced as a result of a neurological condition called reflex sympathetic dystrophy. Duragesic is a patch containing a gel form of the drug fentanyl, which is 100 times stronger than morphine. In the lawsuit, Mrs. DiCosolo's family argued the defendants, Titusville, N.J.-based Janssen Pharmaceutica Inc. and Mountain View, Calif.-based ALZA Corporation, knew about the Duragesic patch's problems, which allowed the patches to leak fentanyl in amounts large enough to kill the patients using it. The patch Mrs. DiCosolo was using at the time of her death was part of a larger group of patches that ALZA recalled in 2004. That same year, an FDA investigator found deficiencies in ALZA's manufacturing practices and quality control assurance policies and procedures.

Zimmer Holdings Inc. (Warsaw, Ind.) announced the Deferred Prosecution Agreement (DPA) with the United States Attorney's Office for the District of New Jersey had expired as scheduled. The company will no longer be subject to oversight by the monitor appointed under the DPA. During the past 18 months, the Company has complied fully with the letter and spirit of the DPA and has made significant enhancements to its compliance structure and processes. The Company's enhanced corporate compliance program addresses how the Company is to interact with physician collaborators, managing potential or perceived conflicts of interest inherent in consulting relationships while preserving the best elements of collaboration that drive innovation in medical devices and services. The Company expects to remain subject to the terms of a Corporate Integrity Agreement it entered into with the Office of Inspector General of the Department of Health and Human Services until September 2012.

Other News:

President Barack Obama unveiled his fiscal 2010 budget, which would allot \$76.8 billion to HHS, and a portion of this would be used to promote the adoption of health IT and direct more than \$1 billion to bolster the FDA's efforts to improve food-safety programs. The budget also would allocate \$1.1 billion for research comparing the effectiveness of competing medications and would push for the creation of a "workable regulatory, scientific and legal pathway" for follow-on biologics.

Department of Chemistry & National Institute for Aviation Research

Wichita State University

Eminent Scholar in Materials Science

Wichita State University (WSU) invites applications for a joint appointment as a Kansas Biosciences Authority Eminent Scholar in Chemistry and a senior Research Scientist in the National Institute for Aviation Research (NIAR). Applicants must be nationally recognized as a leader in the field of materials science, with a chemistry based research program of relevance to the biomaterials industry.

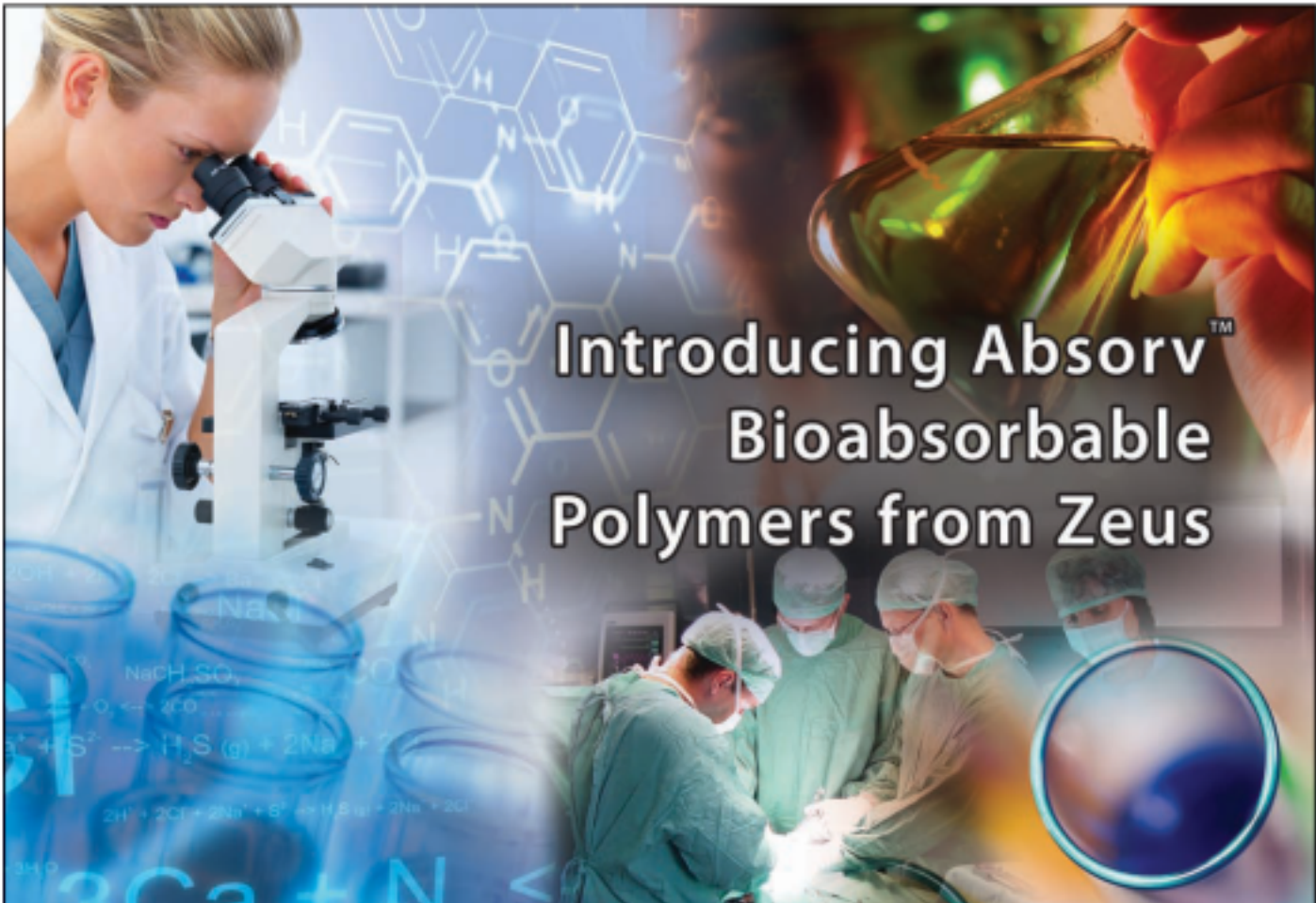
The successful candidate will be appointed 50% in NIAR and 50% as a tenured full Professor in the Chemistry department, will teach at the undergraduate and graduate (M.S. & Ph.D.) levels, continue a vigorous externally funded research program, and engage in departmental service. Promising candidates at an earlier career stage will be considered also, with salary and appointment level commensurate with prior accomplishment.

Applicants must hold a doctorate in chemistry, polymer chemistry, or chemical engineering. An undergraduate degree in chemistry, polymer chemistry, or chemical engineering is preferred. Research experience, a strong publication record, a demonstrated commitment to diversity, and effective oral and written communication skills are also required. Evidence of a nationally recognized research program in materials chemistry related to biomaterials is required.

Preference will be given to US citizens or permanent residents. Applicants must clearly state their status as a US citizen, permanent resident or qualified foreign national (including current visa status).

Applicants should submit a CV with publication record to Professor Bill Stevenson, Department of Chemistry, Wichita State University, Wichita, KS 67260-0051 (Bill.Stevenson@wichita.edu) and copy to laurie.reese@wichita.edu. In addition, applicants should have three individuals who are familiar with their accomplishments submit letters of reference.

The closing date for this position is February 15, 2009, or the 1st of each successive month until the position is filled. WSU is an EO/AA employer. More details on the Chemistry Department and NIAR can be found at <http://www.wichita.edu/chemistry> and at <http://www.niar.wichita.edu/>.



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