



Annual Meeting in San Francisco

THE FOOD WAS FABULOUS! THE COMPANY WAS ENGAGING! THE ATMOSPHERE WAS JOYOUS! This is a great description of the recent ORLAC dinner that was held at the R&G Lounge in San Francisco this past February. ORLAC had much to announce and much to celebrate as a group at this annual event, held in conjunction with the annual ORS meeting.

After starting on an exciting journey that began in San Diego in 1989, ORLAC was recognized as a nonprofit organization in the state of Pennsylvania in 1996. This then led to several outstanding donations and the establishment of 3 annual summer awards programs.

Mr. Rich Debski, as the current president of ORLAC, and Mr. Thay Lee, as the past president of ORLAC, were honored to be able to bring all this good news to the group. Their evening program did not end there. All dinner attendees and their association with ORLAC were introduced from their tables. Special awards were given to many individuals who have supported ORLAC - Mr. Thay Lee, Dr. Jennifer Wayne (past treasurer), Ms. Karen Ohland (past secretary), Ms. Deidre McKenna (past secretary), Ms. Erin McGurk (donation & establishment of summer program), Dr. Freddie Fu (donation), Dr. Harry Rubash (donation), Dr. & Mrs. Savio and Pattie Woo (donation



Dr. Savio Woo, Dr. Freddie Fu, Dr. Harry Rubash, and Dr. Pat McMahon at the ORLAC dinner in San Francisco.

and establishment of 2 summer programs).

The finale of the evening was the presentation of the ORLAC VIP award. The person chosen for this award has touched many lives and has been keenly involved with ORLAC. He has been an inspiration to many, both professionally and personally. He guides young researchers down the path of scientific investigation and teaches them the rigors of the scientific method and scientific integrity. He opens up opportunities and gives them the experience needed to be successful leaders. This award could go to no individual other than Dr. Savio Woo.

As evident in our annual dinners, ORLAC is certainly an ever-expanding group. Alumni from different labs go off to start their own research ventures and encourage new students to join the fold. In addition, alumni from years past still feel the importance of keeping connections, as individuals from Iowa, California, Virginia, Florida, Massachusetts, and New Jersey (to name a few!) continue to be involved with the group. These are exciting times for ORLAC! See YOU at the next dinner!

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FUNDRAISING CORNER

These past few months have been an exciting time for ORLAC fundraising. As reported in the previous ORLAC Newsletter, Dr. and Mrs. Woo have "jump-started" fundraising efforts with the creation of the first ORLAC endowment - their generous donation of 100,000 DM (~\$65,000 US) in loving memory of Dr. Woo's parents and Mrs. Woo's mother have made possible the Mr. and Mrs. Kwok-Chong Woo Award and the Mrs. Ho-Tung Cheong Award.

Following this significant, inaugural donation, ORLAC established 5 funding levels to encourage others to make donations:

ORLAC Funding Levels

Dr. Woo's Circle	\$10,000 +
Mentor Circle	\$5,000 - \$9,999
Leadership Club	\$1,000 - \$4999
Entrepreneur Club	\$250 - \$999
MMTWFFF Club*	\$10 - \$249

*MMTWFFF is an acronym for a typical week in the life of a "labbie" - no weekends!

The year 1996 ended with another spectacular donation - Erin McGurk, MS, entrepreneur extraordinaire, donated \$30,000 to ORLAC to encourage research devoted to directly improving health and medical care - particularly in conjunction with industry projects and to facilitate patent inventions for future medical products. Most significantly, Erin expressed the desire to have the donation support and encourage female bioengineering students. Accompanying her donation, Erin wrote a moving letter to ORLAC, expressing her thoughts on what mentorship is all about:

Dr. Savio L-Y. Woo was my Research Advisor at the University of California, San Diego when I received my MS in Bioengineering in 1986. He was a wonderful mentor and role model, who taught me that passion, hard work, discipline and dedication to excellence are the keys to success. He was, and continues to be, a guiding force and a genuine friend and epitomizes the ideal that a teacher is a teacher for life. It is because of the impact that Savio has had on my life that I wish to share some of my good fortune and success through this donation.

ORLAC has also received three big pledges from internationally respected orthopaedic sur-

geons at the University of Pittsburgh - Dr. Freddie H. Fu, Dr. Harry E. Rubash, and Dr. James H. Herndon. These surgeons are actively engaged in state-of-the art orthopaedic research in the areas of their clinical specialty, and each is at the forefront of applying bioengineering principles to clinical practice. They join Dr. and Mrs. Woo and Ms. Erin McGurk in *Dr. Woo's Circle*.

Activity has been strong in the other funding categories as well. Dr. Goo Hyun Baek and Dr. Ryoma Saito are the first members of the *Leadership Club* while the *Entrepreneur Club* has been a popular funding level, with 10 donations. We are also proud to have 18 donors in the MMTWFFF Club - this club is a good starting point for many ORLAC participants who are still in school or are just beginning to establish themselves in their careers.

To help ORLAC build upon the strong financial foundation that has been created through these initial generous donations, an International Fundraising Committee has been formed. The
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Jennifer Wayne, PhD

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Summer Awards Programs 1997

ORLAC is most pleased to announce three new annual summer awards programs, designed to encourage musculoskeletal research among undergraduate and graduate students studying in ORLAC participants' labs. Each of these programs has at its foundation the generous support of ORLAC individuals. The first two programs evolved from the generous contribution of Dr. and Mrs. Woo through the inaugural Gesellschaft fur Orthopadisch-Traumatologische Sportmedizin (GOTS)-Beiersdorf AG Research Award for 1996. The third program is through a contribution from Erin McGurk who received her Master's in Bioengineering from UCSD in 1986 and has had much success in starting companies of her own.

The three awards and their specifications are:

The Mr. & Mrs. Kwok-Chong Woo Award

Designated for an undergraduate student to perform musculoskeletal research during the summer of 1997. Award in the amount of \$2500.

The Mrs. Ho-Tung Cheong Award

Designated for a graduate student to visit an alumnus laboratory and participate in musculoskeletal research at the host laboratory. At the time of application, the host laboratory must be named. Award in the amount of \$2500.

The Erin McGurk Award

Designated for a female graduate student to perform musculoskeletal research during the summer of 1997. Award in the amount of \$2500.

The application for each of the awards consists of the following:

- 1) One page description of objectives for participating in the program including a description of the project
- 2) Transcript (applicant must be a student during the summer of the award)
- 3) Resume
- 4) Letter of recommendation from a faculty or industry member
- 5) Budget for the designated amount

The application deadline for the awards is **May 30, 1997.**

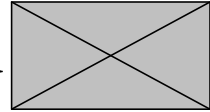
The awardees and their mentors will be contacted by phone and mail by June 10. Checks for the designated amount of the specific award will be made out to the laboratory in which the work is to be conducted, with the understanding that the funds are to be used in support of the awardee's research.

If interested, please mail your application to:

**ORLAC
Summer Awards Programs
P.O. Box 7511
Pittsburgh, PA 15213**

If you have any questions, please contact Rich Debski at (412) 648-1943 or genesis1+@pitt.edu.

News from Around the World



From former members of the University of California San Diego Laboratory:

Doug Adams, Ph.D. (Staff from UCSD) received his PhD from the University of Iowa in 1996 and took a postdoctoral position with the research team in the Department of Orthopaedic Surgery at the University of Minnesota with Dr. Jack Lewis and Dr. Ted Oegema. They are interested in studying the early progression of osteoarthritis. Dr. Adams and his collaborators have also developed micro-scale tear tests that are performed on intact small joint surfaces. They plan on using this method to measure the fracture strength/toughness of articular cartilage in a mouse models of osteoarthritis.

Michael Danto (MS from UCSD) is finishing medical school in Detroit this spring and has been accepted into Stanford's residency program in Physical Medicine & Rehabilitation. He will first spend 1 year in an internship at Santa Clara Valley Medical Center as part of this residency program. Wife Allison is still practicing law and they expect their first baby in September.

Fredrick P. Field, MS (MS from UCSD) is a Principal Design Engineer at Alaris Medical Systems in San Diego, CA. He is currently working on a predictive thermometry algorithm.

Lynnette Fleck (Dr. Woo's secretary at UCSD) is doing part-time secretarial work through UCSD. Last we heard, she was working for the transplant center.

Mark A. Gomez, PhD (PhD from UCSD) [wife Patty, daughter Danielle (11), son Nicholas (7)] works as an Expert Biomechanical Engineer for Medical Legal Systems in San Diego, CA as well as an Assistant Clinical Professor of Orthopaedic Surgery UCSD. His specialty is consulting in the area of injury biomechanics. His son Nicholas is playing cello and will soon be taller than Mark. Danielle is playing violin and has started on the basketball team.

J. Marcus Hollis, PhD (PhD at UCSD) has started his own company called Blue Bay Research

Inc., located in Milton, Florida, specializing in custom devices. Check out his website at <http://home.earthlink.com/~bluebay/> Marcus is also Associate Professor of Mechanical Engineering and of Orthopaedic Surgery at the University of South Alabama. His son Cameron just turned two.

Grace Liao, MS, (MS from UCSD) [husband Brent Seaton, Ph.D. kids Selea (4), Ryan (2)] is currently a Senior Engineer at Alcon Surgical in Irvine, CA.

Paul Lubock, MS (undergrad from UCSD) [wife Tricia, sons Nathan (6) Ryan (5)] is a Partner of ABACUS Design and Development Inc, in Aliso Viejo, CA. This is a medical device design and development company.

Roger Lyon, MD (resident in UCSD lab) is currently on staff at the Children's Hospital of Wisconsin and Assistant Professor at the Medical College of Wisconsin. He is in general pediatrics but specializes in trauma, club feet, scoliosis, and hip dysplasia. He and his wife Rachel have 3 children. Beth just turned 6 and is in kindergarten. Will is 4 and just recently broke his femur. His son Peter is 3.

Karen May-Newman, PhD (MS from UCSD) finished her postdoc at Johns Hopkins in July 1996. She then went to work at Alliance Pharmaceutical Corporation on Torrey Pines Road in San Diego as a Senior Research Scientist. Alliance is a pharmaceutical research and development company focusing on transforming novel scientific discoveries into innovative drug products.

Erin McGurk, MS (MS from UCSD) - Magic Venture Capital, Palo Alto, CA. Erin and Ron Started Micro Interventional Systems which was bought out by Medtronic Inc. in November 1995. Erin worked for the company for approximately 18 months and left the company to spend more time with the family. Since then, she started a venture capital company with Ron and two other partners. This company is called Magic Venture Capital which provides seed money and consultation to startup companies. They are having a lot of

fun doing this. The first portfolio company is "Spinal Concept" which is doing very well. On a personal note, she is spending a lot more time with Megan and Michael. In addition, Erin and Ron are going to Russia this week to adopt a daughter. Her name is Katerina.

Karen Ohland, MS (staff from UCSD and MSRC) is currently serving as chair of the R&D Safety Committee at Howmedica in Rutherford, NJ as well as serving on the Board of Directors of the local ASME chapter. She is actively involved with community activities including positions as church treasurer, serving as a member of the Board of Directors of the Rutherford Senior Center and a member of the Interreligious Fellowship for the Homeless of Bergen County (NJ).

Frank Silva, BS (BS from UCSD) [wife Sandy and daughter Rachel] is a Product Manager at Automated X-Ray Systems at Nicholet Imaging Systems in San Diego, CA

Jeff Spiegelman, MS (MS from UCSD) [wife Clara, daughters Rebecca (6), Sara (3)] is President of Aeronex Inc. in San Diego, CA.

Caroline Wang, MS (MS from UCSD) is on a one year leave of absence from Johnson & Johnson since the birth of her son Christopher on October 16, 1996. Husband Mike Cassidy sold his startup company last year for millions! This transaction took place 2 days before they learned she was pregnant!

From the Orthopaedic Biomechanics Laboratory Long Beach VAMC and University of California, Irvine:

Thay Q Lee, MS (MS from UCSD) currently holds positions as: Biomedical Engineer - Department of Physical Medicine and Rehabilitation, Long Beach VAMC; Associate Clinical Professor - Department of Orthopaedic Surgery, UC Irvine; Associate Clinical Professor - Department of Physical Medicine and Rehabilitation, UC Irvine.

Patrick J McMahon, MD (resident at MSRC, faculty at Long Beach) is currently an Assistant Professor in the Department of Orthopaedic Sur-

gery, UC Irvine. Pat and Thay are still studying the shoulder and the patellofemoral joint. Pat will be married to Heather in the fall of 1997.

Current Staff at Long Beach include: Matt D Sandusky, BS, TC Mao, PhD, CM Powers, PhD, PT, Robert P. Fogolin, MD, J Dettling, MD, MM Schulz, MD, J Lilley, MD, FE Glaser, MD, and WM Weiser, MD.

The study entitled "Shoulder Instability: A Multidisciplinary Study of the Glenoid Origin of the Anterior Band of the Inferior Glenohumeral Ligament" was nominated for the Neer Award at the Shoulder and Elbow Meeting in San Francisco, CA with Pat McMahon as the primary author and Thay Lee as the senior author. (We didn't win.)

Thay Q Lee, MS is nominated for the "Federal Executive Board Distinguished Public Service Award (Category - Scientific and Technical)" Hope he wins — will find out on 5/7/97.

Andy Dang is attending the NYU School of Medicine (1st Yr). Kathryn S. Hicks, BS is currently at the Institute for Biological Research and Development in Irvine, CA. TW Peatman, MD is an Orthopaedic Resident in Chicago. Todd A. Shapiro is at Chicago Med (3rd Yr).

From the Orthopaedic Research Laboratory at Virginia Commonwealth University:

Dr. Jennifer Wayne (PhD from UCSD) is the organizer of 5 soft tissue mechanics sessions at the summer Bioengineering Conference in Sun River Oregon. In addition, she was invited by Dr. Jay Humphrey to the University of Maryland in Baltimore County to give a seminar to the Mechanical Engineering Department on her research in the mechanics of articular cartilage. Dr. Wayne was also invited to present some of her research on soft tissues at the winter annual meeting of ASME (IMECE).

Several people have arrived at the Orthopaedic Research Laboratory headed by Dr. Wayne. John Wilkerson, MD is spending 1 year as a research fellow. W. Jason Gammon has joined the Orthopaedic Research Laboratory as a laboratory engi-

neer, after receiving his MS in Physics from Virginia Commonwealth University.

From the MSRC in Pittsburgh, PA:

Savio L-Y. Woo, PhD received an honorary Doctor of Science degree from California State University, Chico. The California State school system encompassing over 250,000 students gives only 10 honorary degrees a year. Dr. Woo is extremely pleased with this honor. Dr. & Mrs. Woo's daughter Kirstin will be graduating in May from Brown University. She will be working as a lab assistant at the University of California, San Francisco. Currently she is very excited with plans for senior week and is responsible for designing the cover of the senior week program. Their son Jonathan has been accepted to Boston University, Syracuse, Villanova, Clark, Wheaton, and Penn State. As of this writing, Jonathan has not finalized his choice of school but has narrowed it down to Boston University and Villanova.

Dan Baker, PhD, CPE (faculty at MSRC) is in Seattle working part-time at the University of Washington and has started up his own consulting firm, Kinetic Research & Design. Per his brochure they provide "professional expertise in the design, development, testing, and evaluation of products, processes, and workplaces" in the areas of "biomedical products, manufacturing improvements, product liability, workplace safety and design." Dan can be reached by email at drbaker@eskimo.com. Visit his website at <http://www.eskimo.com/~drbaker/KRD>.

The biomaterials laboratory at the MSRC headed by Arun Shanbhag, PhD has much to be proud of as the recent winner of the 1997 Hip Society's John Charnley Award for their work entitled "Potential Inhibition of Wear Debris-Mediated Osteolysis in a Canine Total Hip Arthroplasty (THA) Model." It was co-authored by Carl Hasselman, MD and Harry Rubash, MD. The award was presented at the AAOS meeting Hip Society Specialty Day to Dr. Shanbhag and was exceedingly well received.

One of our most exciting occurrences of the year was the Multi-Institutional Biomechanics

Research Symposium involving the MSRC, the Orthopaedic Bioengineering Laboratory at Columbia University, directed by Dr. Van Mow, and the Orthopaedic Bioengineering Laboratory at Johns Hopkins University, directed by Dr. Ed Chao. All three of these institutions gathered at the Johns Hopkins University for a day long symposium. Presentations were made by fellows and students and Dr.'s Chao, Mow and Woo made valuable suggestions and shared their philosophies.

Tom Runco, MS, was a finalist for the Masters level student paper competition at the ASME Winter Annual Meeting. His presentation "Non-contact Evaluation of In Situ Surface Strain Distribution of the Anterior Cruciate Ligament" won an honorable mention. Mr. Runco also completed his MS degree in August and is now working in the Pittsburgh area.

Two NIH applications by the ACL and MCL laboratories at the MSRC, with Dr. Woo as the Principal Investigator, have been successfully renewed. The ACL laboratory received funding until the year 2001 with the total award being over \$800,000. The MCL laboratory's renewal application scored within the 5.8 percentile, and is to be awarded four more years of funding totaling \$1.3 million.

We also continue to be successful in gaining funds from private and industrial sources. Grant applications were submitted by the Cartilage and PCL laboratories for a 4th year extension of their Whitaker Foundation grants. The Upper Extremity Laboratory received a new grant from OREF with Matthew Tomaino, MD as the principal investigator. Dr. Lars Gilbertson also had a successful application for 3 years of funding from the Whitaker Foundation. The grant is entitled "Biomechanical Effect of Spinal Fusion on Adjacent Segments." Mark DiSilvestro, BS, a first year bioengineering graduate student at the MSRC received a Graduate Whitaker Fellowship.

The Department of Bioengineering of the School of Engineering at the University of Pittsburgh recently took a huge step forward when it received a Whitaker Foundation Development Award for "Innovation in Bioengineering Educa-



Mrs. Pattie Woo and Dr. Glen Livesay at the ORLAC dinner.

tion.” The award totaled \$3 million for 4 years and an additional \$2 million for the final 2 years. Matching funds will be provided by the

University of Pittsburgh and its Schools of Engineering and Medicine to support this program. The funding will be used to institute an undergraduate bioengineering degree and to enhance the currently successful graduate bioengineering program.

On the personal front, Ms. Serena Chan announced her engagement to Mr. Kyi Saw and will be married on May 10th in New Jersey. Mr. David Smith will be married to Ms. Mary Beth Ferla on May 24th in Pittsburgh, PA. On August 9th, Mr. Ted Clineff will be married to Ms. Amy McKenna in Norristown, PA. Finally, a former student in the lab, Mr. Duane Morrow announced his engagement to Valerie. They are currently residing in Rochester, NY, where Duane is attending graduate school at the University of Rochester.

Families at the MSRC are expanding as well. Kenneth Fischer, PhD and his wife Sandie are expecting their first child in September. Our administrative coordinator, Diann DeCenzo and her husband Lou are expecting their third child in November.

Masataka Sakane, MD finished his two year fellowship here at the MSRC and returned with his wife Michiko and daughters Natsumi, Tomoha, and Mafuyu to Kennan Hospital in Tsuchiura-City, (near Tsukuba), Japan.

Christina Malin, BS a technical staff member who began as an undergraduate summer student at the MSRC has finished her tenure here at the MSRC and moved to Boston, MA.

The MSRC welcomed three new post-doctoral research fellows. Jae-Yeong Cho, MD and Shin-Yoon Kim, MD from Korea, and Akihiro Kanamori, MD from Japan. Each will be spending 1 to 2 years at the lab.

(Fundraising Corner - continued from page 2)

International Fundraising Committee consists of 6 ORLAC participants from North America, Europe, and Asia who collectively are actively engaged in practically every aspect of orthopaedic surgery - from basic science research and education through clinical practice and industry. The present International Fundraising Committee members are:

- Lars G. Gilbertson, PhD, USA - Chair
- Goo Hyun Baek, MD, Korea
- Thay Lee, MS, USA
- Karen Ohland, MS, USA
- Shinro Takai, MD, PhD, Japan
- Stefano Zaffagnini, MD, Italy

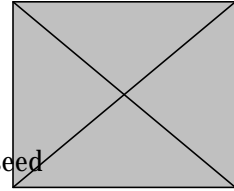
The diverse expertise of the International Fundraising Committee coupled with its wide geographic appeal should enable ORLAC to reach out to many who would like to support ORLAC's mission through their donations.

The goals of the International Fundraising Committee for 1997 are to attract 50 new donors to ORLAC, and to bring the total amount of donations and pledges to the quarter million dollar mark - accomplishment of these goals would further solidify ORLAC's status as an up-and-coming force to be reckoned with in orthopaedic research.

On behalf of the International Fundraising Committee, I would like to extend our grateful thanks to those who have made donations and pledges to ORLAC. Your financial contributions have given ORLAC a running start, and our committee will work hard to build onto the strong base of support that you have provided. I would also like to encourage those who have not taken the opportunity to make a pledge or donation to ORLAC to do so. If you would like to make a donation to ORLAC or have any questions regarding fundraising, please feel free to contact me or any one of the International Fundraising Committee members - we will be glad to help you and answer your questions.

ORLAC is here to stay, and with your help, we can grow bigger and stronger and make a real difference in orthopaedic research. Thank you!

FUTURE of *Your* ORLAC



The future goal of ORLAC is to nurture and organize the internationally diverse expertise of orthopaedic researchers and industrialists to help promote and support the development of research, clinical practice, and entrepreneurial endeavors. Current ORLAC supporters include internationally renowned scientists and surgeons as well as very well accomplished business entrepreneurs. With this strong leadership and support along with ORLAC's philosophy "Relentless Pursuit of Excellence", ORLAC will grow into an internationally recognized entity.

For the next five years, ORLAC's goals are:

- 1) To help promote and support the development of orthopaedic research, clinical practice, and entrepreneurial endeavors by becoming an *internationally recognized charitable organization*.
- 2) To establish collaborative partnerships between orthopaedic research laboratories as well as industrial and clinical interests both nationally and in-

ternationally.

- 3) To leverage ORLAC's financial resources to provide seed funding for young investigators, students, residents, and fellows engaged in orthopaedic research.
- 4) To sponsor biannual international symposia for the dissemination and peer review of information derived from orthopaedic research.

Your intellectual and financial support has enabled us to begin this process. However, your continued support will be essential for ORLAC to accomplish its future goals.

We would like to welcome the **newest** members of our Board of Directors - **Dr. Lars Gilbertson** and **Dr. Patrick McMahon** and are looking forward to their contributions to our organization.

ORLAC
P.O. Box 7511
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