Connections 2010

A Newsletter from the Pediatric Orthopedic Training Program
Rady Children's Hospital and University of California – San Diego

Issue 6 – 2010

Mubarak | Wenger | Chambers | Newton | Wallace | Pring | Yaszay | Edmonds | Hosalkar

Message from the Director

Dennis R. Wenger, M.D.

We have just completed the 2010 David Sutherland Visiting Professorship in children's orthopedics, which brings our academic year into focus, and thus it is time for the annual update on the activities of the Rady Children's Hospital/University of California San Diego children's orthopedic training program. The aim of our Connections newsletter is to keep former fellows, residents, friends and colleagues updated on the clinical, educational and research activities of our program.

Our mission is to provide world-class patient care, education, and research for children's orthopedic conditions. Our education and teaching are based on a busy children's orthopedic clinical program, based in a hospital with a high volume elective-reconstructive patient base as well as a busy Level I trauma system. To support this volume we have a very large, fulltime academic orthopedic staff, which allows specialization in every area of children's orthopedic surgery. Our research is focused on the clinical and biomechanical issues that allow early application to patient problems (more inside).

New Care Model

The rapid change in American healthcare, as shepherded through by President Obama, provides the stimulus for new care models. UCSD and Rady Children's Hospital were already deep into these ideas and in January 2010 our orthopedic group joined the Rady Children's Hospital Foundation, in conjunction with UCSD (see article inside). We look

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Lisa Crabb Wallace – A Dedication

Lisa Crabb Wallace, R.N., who has served for many years as our orthopedic residency and fellowship coordinator, has been instrumental in providing stable management that allows day-to-day organization and strategic long-term planning that makes our fellowship one of the best in the nation. Recently Lisa has been on sick leave and has been unable to fully contribute to the academic effort. We felt that Connections 2010 should be dedicated to Lisa for her incredible devotion to Rady Children's Hospital, and specifically her brilliant organization and management of the orthopedic training program.

Lisa was born into a military family in Walnut Creek, California, with both her father and then her brother serving as fighter pilots in the U.S. Navy. At an early age the

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forward to working in this new cooperative venture.

Continued Recognition

We recently received notification that the US News and World Report 2010 Healthcare issue has ranked the orthopedic surgery program at Rady Children's Hospital San Diego as the fourth highest rated program in the United States. This ranking confirms our energy, strategy and hard work in all areas of children's orthopedic surgery, including patient care, education and research.

New Faculty and Programs

This has been an extremely successful year, with continued growth in every area. Dr. Harish Hosalkar, who joined us from the University of Pennsylvania as well as having had a fellowship at the University of Bern in Switzerland, has become extremely active in the new area of hip preservation surgery (see inside).

We have established an international hip referral center which is co-directed by Dr. Wenger and Dr. Hosalkar. The goal of this center is to provide world class care for hip problems in children and adolescents. The center will include a strong research component which is being organized and directed by Dr. Hosalkar. Several of our staff have extensive clinical and research interest in hip problems and will be critical faculty for the hip center.

In addition, we will be joined this year by Dr. Andrew Pennock, a new sports medicine colleague who is completing his fellowship at the Steadman-Hawkins clinic in Vail, Colorado, one of the worlds best known sports medicine training programs. Andy will bring a significant new skill base, and in joining our sports medicine team will help us to provide the highest level of childhood and adolescent sports medicine care and research.

Education

Our fellowship program continues to be among the best known in North America. This allows the Rady Children's Hospital/UCSD program to prepare pediatric orthopedic surgeons who will assure leadership for quality care throughout North America and the world. It should be noted that this years recruiting utilized the fellow selection match organized by POSNA and implemented by the San Francisco Matching Program, a private enterprise. This match worked very well for us and we look forward to participating in the same program in the future.

Our orthopedic residency continues to have superb residents from the University of California San Diego, the San Diego Naval Medical Center, and the Wilford Hall Air Force program in San Antonio. We have just received word from San Antonio that the process of combining the Wilford Hall program with the Brooke Army Medical Center program is continuing and will soon be complete. Their residents will continue to rotate to Rady Children's Hospital San Diego, but likely we will be alternating between Air Force and Army residents. We look forward to this arrangement since we have had a very good experience working with the residents from San Antonio, who have enjoyed and benefited from the high volume patient care model that includes an academic approach.

The nurse practitioner/physician assistant program continues to grow and beautifully supplements our residency program, allowing us to provide both a patient care and educational environment for our very large orthopedic volume. We estimate that we serve a population of about 4.5 million people, and that our more than 60,000 patient visits per year is one of the largest in the nation.

Research Program

Our research program continues to be highly productive, resulting in many publications and presentations at national and international meetings, including the Scoliosis Research Society, the Pediatric Orthopedic Society of North America, the European Pediatric Orthopedic Society, and others. Dr. Peter Newton provides the leadership for the research program, but most of our staff are also very active in research. Our younger orthopedic faculty are particularly active in developing new research programs that will allow us to gain outside funding as well as to provide new treatment methods for children. Dr. Diana Glaser, our PhD bioengineer, is now well established in her position and she provides a report later in this issue.

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Lisa Crabb Wallace

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family settled in Coronado, California, and have remained there ever since. Demonstrating the traits shown by her accomplished family, Lisa's leadership and organizational skills have been instrumental in elevating our residency and fellowship program to the forefront.

After receiving her nursing degree at San Diego State University, Lisa worked as a pediatric nurse in Dallas, Texas, allowing her to develop a good understanding of how nursing and medical care are organized throughout North America. She then returned to San Diego where she, her husband (Dr. Doug Wallace) and their family live near Lisa's original family home on beautiful Coronado Island.

Lisa's skills are known to all of you. She is petite and quiet, but brings lively and acute analytic skills to every problem that she faces (and with a great sense of humor). Her ability to listen and then come up with the correct solution for a problem remains unparalleled. Once a decision has been made and an action plan outlined, her drive and ability to implement policy brings out the disciplined (perhaps military like?) part of her character.

As children, many are taught by our parents that our activities, behavior and location are always followed by a higher being. Lisa brought this special sense to running an orthopedic residency and fellowship, yet always in a constructive, positive style. With Lisa arranging the work schedule, all the work gets done, with the workers (that includes all of us at every level) happy to have pitched in.

Lisa's ability to follow a complex resident, fellow, NP/PA schedule and to track all parties remains uncanny. If for some reason a resident is missing in a clinic, she instinctively knows whether or not he/she is post-call, is scrubbed in on a case, is cross-covering for a colleague or in the rare case might simply have decided to have a short nap – and all without a GPS tracker!

Lisa Crabb Wallace has made a remarkable contribution to the development of children's orthopedic education and patient care, not only here in San Diego but also throughout North America and the world (via international fellows). Her remarkable organizational skills and ability to implement policy, as well as her dependability and loyalty to her colleagues, have set a standard for professionalism that will not be surpassed.

Message from the Director -continued

National Leadership News

The recent POSNA (Pediatric Orthopedic Society of North America) meeting in Hawaii was a great success with several special honors focused on the Rady Children's Hospital orthopedic program. Dr. Peter Newton, who had served as treasurer for POSNA over the last several years, was elevated to the role of second vice president. He thus enters the presidential line and two years from now he will be president of POSNA, the world's largest and most influential children's orthopedic organization. We congratulate him.

Scott Mubarak, who has a special interest in Hawaii and vacations there often, gave the outstanding Presidential Guest Lecture entitled "Hawaii, First Contact" which focused on the history and development of the Hawaiian Islands. The widely acclaimed lecture was attended not only by the orthopedic surgeons at the meeting, but also spouses and other guests.

Also, Eric Edmonds of our Orthopedic Sports Medicine group won the prestigious St. Giles Young Investigator Award which includes substantial funding for research projects.

Hospital Building News

Our large patient volume continues to challenge us for adequate bed space, operating rooms, etc., however this will soon change. The beautiful new $400 million Rady Children's hospital building is now being completed and will be physically attached to the current hospital. The plan is for us to move into the building on October 10, 2010 (10/10/10 – quite clever!). We look forward to having room to expand and also to better facilities including a dedicated trauma room for acute orthopedic surgery cases.

Summary

The orthopedic education and research program at Rady Children's Hospital continues it's national and international prominence. We believe our educational environment for medical students, residents and fellows is without peer and we dedicate great energy toward that mission. Our research efforts are broadly based and focus on many areas, including bioengineering. Our presentation of this work at national meetings, as well as the surgical skills and reputations of our faculty, allow us to attract the best fellows from throughout the USA and the world. Moving into new facilities will greatly enhance our productivity. We appreciate the support of the Rady Children's Hospital leadership, as well as our growing alumni group, who are interested in our mission.

Dennis R. Wenger, M.D.

Director,
Pediatric Orthopedic Training Program
Rady Children's Hospital – San Diego

Clinical Professor of Orthopedic Surgery
UCSD

The surest way to currupt a young man is to teach him to esteem more highly those who think alike than those who think differently. – NIETZSCHE

Changes in Care Models – the Rady Children's Specialists Medical Foundation

The national move to a new healthcare model is to some extent being paralleled at Rady Children's Hospital San Diego in conjunction with the University of California San Diego. As many of you know, we have always been a major teaching hospital for UCSD but our UCSD faculty and the staff at Rady Children's Hospital had not been fully integrated until recently. About two years ago we began a process to integrate the Children's Specialists of San Diego (CSSD) medical group with UCSD faculty under a Medical Practice Foundation at Rady Children's Hospital, forming a unified group known as Rady Children's Specialists of San Diego.

It has become clear that a better model for the future, which will allow improved patient care, better teaching, and better research would be based on a medical practice foundation model. This resembles models at the Cleveland Clinic, the Mayo Clinic and the Scripps Clinic here in San Diego. Accordingly, an agreement was signed between Rady Children's Hospital, CSSD, and UCSD in 2009, which allowed the formal development of such a model of care. Dr. Herbert Kimmons, the President of Children's Specialists of San Diego, was chosen as the new physician leader for this collaborative model. In his role as a leader of the combined pediatric specialists and surgeons, he has been named Dean of Children's Clinical Services at the UCSD School of Medicine, and Executive Director of Rady Children's Specialists, Medical Foundation. Dr. Kimmons is well known and respected by all physicians at Rady Children's Hospital and UCSD, and we look forward to the results of this new collaborative model for healthcare.

So how does this affect the division of orthopedics? First of all, we continue to prosper and grow and have added a new faculty in each of the last two years (see enclosed articles). We continue to increase our clinical volume. The foundation model will give us a more stable environment and will include the incentive driven performance models which have allowed our staff to pursue a dynamic work ethic which all of you are familiar with from your time as fellows.

The Rady Children's Specialists Medical Foundation, in conjunction with UCSD, is well on it's way and should allow us to achieve a bright future.

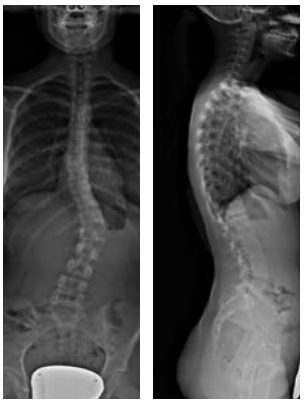
Rady Children's Specialists
of San Diego
A Medical Foundation

New Imaging Technology – The EOS System

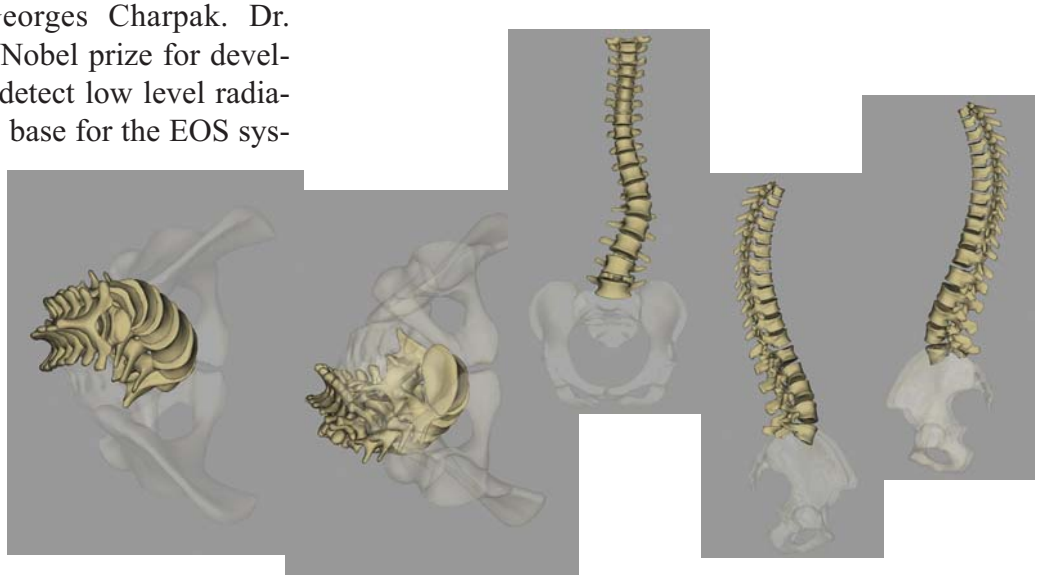
Rady Children's Hospital San Diego is proud to have been the first pediatric orthopedic center in the U.S. to offer patients the French developed EOS imaging system that allows head to toe images which are of special value to develop three dimensional understanding of scoliosis, lower extremity, deformity and other orthopedic conditions. Dr. Peter Newton, director of both our research program and our scoliosis service, was instrumental in developing the international collaborative research mission which allowed Rady Children's Hospital San Diego to acquire the first EOS unit for a children's hospital.

Rady Children's is the first pediatric hospital in the nation to install the EOS 3D imaging system.

The system allows high quality images (see below), a markedly lower radiation dose, and the capacity for 3D modeling (also see below). The unit opened just about a month ago, and already 300 images have been performed and clearly are producing data that will allow more sophisticated care for children. The EOS system produces high quality images using significantly less radiation than a standard x-ray, perhaps up to 9 times less for a scoliosis study. An AP and lateral image is developed by a single scan. The state of the art technology that allows this imaging was developed in Paris, France, by a team of investigators that included Jean Dubousset, the renowned scoliosis surgeon form Paris, and physicist Georges Charpak. Dr. Charpak eventually earned the Nobel prize for developing the technology to easily detect low level radiation signals which serves as the base for the EOS system.



Plain image taken with EOS system.



3D reconstruction of the same image (all with minimal radiation).

New Staff

Harish Hosalkar, M.D.

Harish Hosalkar, M.D., joined our Rady Children's Hospital orthopedic staff in July, 2009, and is now developing a very active clinical and research program related to the new field of hip preservation surgery. Dr. Hosalkar is a native of India and completed his residency in Mumbai, India, followed by a fellowship in children's orthopedics at the Great Ormond Street Hospital for Children in London. He then completed a full additional residency at the University of Pennsylvania, where he graduated with high honors, including being awarded the Outstanding Senior Resident in a Teaching Capacity honor. He then took a three month A-O Mueller hip fellowship in Bern, Switzerland, where he learned the techniques of both Dr. Reinhold Ganz and Professor Klaus Siebenrock. During that time he produced several publications related to the area of hip preservation surgery.

Dr. Hosalkar and his wife Hetal, an anesthesiologist, and their son Hriday and daughter Hritika are now settled in the eastern Scripps Ranch area of San Diego and in fact live near Dr. Eric Edmonds and Dr. Burt Yaszay, two of our other young academic staff.

Dr. Hosalkar has been instrumental in establishing the International Center for Pediatric and Adolescent Hip Disorders, which he co-directs with Dr. Dennis Wenger. The main goal of this center is to further increase the quality and volume of pediatric orthopedic hip care provided by Rady Children's Hospital San Diego. Many of our faculty, who have extensive clinical and research interest in hip problems, will participate in the center.

Dr. Hosalkar has been a dynamo in initiating important orthopedic research activities. He has been working with Dr. Diana Glaser in the biomechanics laboratory and has set up a model for interarticular hip pressure evaluations, using an initial porcine model. In addition, he developed a method to study joint pressures related to isocentric ligamentum teres transfer, which we are considering in the treatment of complex hip disorders in childhood. Both of these projects resulted in poster presentations at the European Pediatric Orthopedic Society meeting as well as the POSNA meeting in Hawaii. Future publications will follow.

Dr. Hosalkar also has an interest in children's orthopedic trauma and in all academic areas of children's orthopedics. He already has more than 100 publications in the orthopedic literature and his presence here assures the continued national and international prominence of our orthopedic training and research program. We have had multiple fellows visiting from throughout the world and North America, with Dr. Hosalkar's work being a reason for their coming here (see later section on ASG Traveling Fellows).

We are happy to have Dr. Hosalkar and his family with us and we look forward to a bright future.

Hosalkar family

Once Again!

National Ranking of Orthopedic Program – Rady Children's Hospital – San Diego

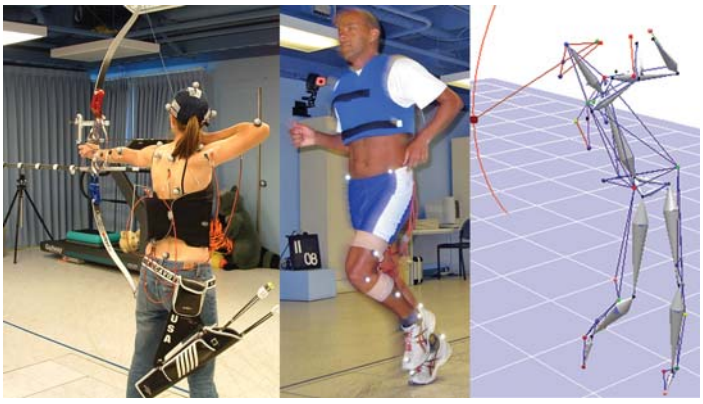
2010

May 2010 again brought fantastic news to Rady Children's Hospital San Diego regarding it's orthopedic department. The U.S. News and World Report's annual review of children's hospitals throughout North America ranked our orthopedic department as the fourth highest in the United States. We are happy to accept this honor and believe that it accurately reflects the events, interest, and dedication of our academically oriented staff, who are not only excellent clinicians and surgeons, but are also interested in teaching and research. Extensive orthopedic research has been carried out and presented nationally and internationally, as well as being published. Our pediatric orthopedic fellowship is one of the nation's leading training programs and we have an outstanding resident education program. Furthermore, Children's Hospital is an outstanding institution with many excellent departments, especially radiology and anesthesia, which greatly support our surgical and research mission.

We have worked hard over many years in aspiring to be the best and it appears that these efforts have been rewarded and that our continued hard work will be justified.

Teaching

Patient care



Research

New Orthopedic Staff Surgeon – 2010

We are pleased to announce that beginning September 1, 2010, we will have a new orthopedic staff member who comes to us from the renowned Steadman-Hawkins sports medicine clinic in Vail, Colorado (recently re-named the Steadman Clinic). Dr. Andrew Pennock is very well known to us here in San Diego because he was an outstanding UCSD resident before going to Vail for his sports medicine training. He has a very strong interest in cartilage research, focusing on the storage of cartilage and cartilage transplant issues, and produced many important papers during his residency. His interest in sports medicine began in childhood, when he became an expert skier and eventually an All-American at Dartmouth University, where he specialized in the downhill and other events. This of course gave him great exposure to sports medicine and was a lead-in for him wanting to go to Vail for his fellowship. The Vail fellowship program is perhaps the most sought after sports fellowship in the world, and Andrew was accepted because of his strong academic record here at San Diego and his research interests. Being a sports star himself probably didn't hurt.

During his year at Vail Andy has been involved with many of the international sports teams, and in fact spent a fair amount of time in Europe helping the ladies alpine skiing team prepare for the Winter Olympics, which occurred this last February in Vancouver. Doing warm-up runs with Lindsay Vonn (eventually the downhill champion) was just one of his sporting activities.

Dr. Pennock has an intense interest in developing the Rady Children's Hospital sports medicine program and will join our other staff, including Drs. Chambers, Edmonds, Pring, and Wallace in making our orthopedic sports medicine program preeminent. His interests will include all types of joint injuries and he will also bring special knowledge and skills in the area of hip arthroscopy, which will be critical for our joint preservation program. We look forward to the arrival of Dr. Pennock and his family.

SLAOTI International Fellows

Sponsored by POSNA

This year Rady Children's Hospital San Diego and the University of California San Diego were selected by the Board of Directors of the Pediatric Orthopedic Society of North America (POSNA) to host the Society of Latin America for Orthopedic and Traumatology International (SLAOTI) fellows on their North American traveling program. We were chosen for being a center with advanced treatment and research methods which would be of interest to international fellows. Thus April 29 and 30, 2010, were dedicated to hosting our guests who included:

- Daniel Augusto Carvalho Maranho –Sao Paulo, Brazil
- Juan Carlos Gonzalo Hernandez Bueno – Santiago, Chile
- Valeria Amelong – Rosario, Argentina
- Wilson Lino Junior – Sao Paulo, Brazil

As in all visiting professorships, the visit was primarily focused on clinical and academic efforts, including observing operations in Children's Hospital. Multiple papers were presented by our visiting orthopedic surgeons. Finally, several social events allowed us to round out the event.

Rady Children's Hospital and the University of California San Diego were honored to host this year's SLAOTI fellows.

Rady Children's Hospital San Diego faculty entertaining the SLAOTI fellows at Il Fornaio restaurant – Coronado, California

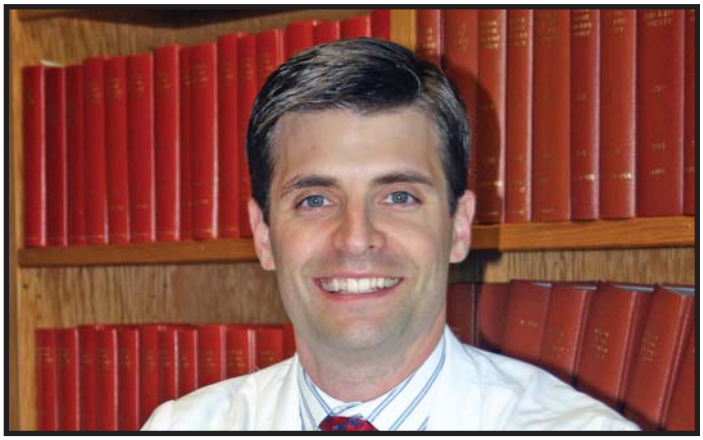
2009-2010 Fellows – Children's Hospital-San Diego

The RCHSD-UCSD fellowship program in children's orthopedics and scoliosis is among the most sought after in the United States. The balance of training that fellows receive here, covering all areas of children's orthopedics, as well as the available research opportunities, are the reasons that our program is so sought after.

Our outstanding 2009-2010 fellows, selected from a very competitive applicant pool, represent the future of children's orthopedics. All have accepted staff positions in well known academic centers and we congratulate them for their accomplishments.

Robert Cho, M.D.

Bob was born in Seoul, South Korea, and moved with his family to the USA at a young age. He completed his undergraduate education at Cornell University, followed by medical school at Drexel University College of Medicine in Philadelphia. He remained at Drexel for his orthopedic residency and then came to San Diego for his fellowship in 2009. Bob's research interests include hip disorders in childhood as well as spine disorders. He has accepted an academic position in the department of orthopedic surgery at the Shriners Hospital in Los Angeles and will be a member of the clinical faculty at UCLA.



George Gantsoudes, M.D.

Geordy, a native of Greenwich, Connecticut, grew up in the Chicago area. He earned his BS at the University of Michigan and his medical degree at the University of Illinois-Chicago College of Medicine. After completing his orthopedic residency at The Mount Sinai School of Medicine in New York he came to San Diego for his fellowship. Geordy's research interests include foot disorders in childhood. After completing his fellowship Geordy will join the academic faculty at the Indiana University School of Medicine, working at the James Whitcomb Riley Hospital for Children. There he will join prior San Diego fellows Shyam Kishan (2005) and Christine Caltoum (2007) who are already on the staff in Indianapolis.

2009-2010 Fellows – Children's Hospital-San Diego

Robert Lark, M.D.

Rob Lark was born in Charlotte, North Carolina, and earned his BS in physics at The Citadel in Charleston, South Carolina, and his Masters in physiology at North Carolina State University in Raleigh. Following that he attended medical school at the University of North Carolina-Chapel Hill, followed by orthopedic residency at Duke University in Durham. Rob's research interests include spine disorders and musculo-skeletal trauma in childhood. He will be returning to Duke University Department of Orthopedic Surgery as a member of their academic faculty.

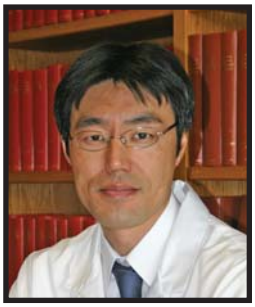
Raymond Liu, M.D.

A native of Los Angeles, Raymond attended UCSD as an undergraduate, earning his BS in bioengineering, followed by medical school at Johns Hopkins University in Baltimore. He completed his orthopedic residency at Case Western Reserve in Cleveland, Ohio, before joining us in San Diego for his fellowship. Ray's major research interests include scoliosis research and outcomes studies in children's orthopedic trauma. He will be returning to Cleveland to assume an academic faculty position at Case Western Reserve University, working in Rainbow Children's Hospital.

International Fellows

Ana Cunha, M.D.
Residency:
Universidade Federal do Parana,
Curtiba Parana, Brazil
Currently:
Hospital Pequeno Principe,
Curtiba Parana, Brazil

Luis Moraleda, M.D.
Residency:
Hospital Universitario la Paz,
Madrid, Spain
Currently:
Universidad Autonoma de Madrid
Madrid, Spain



Takashi Ono, M.D.
Residency:
University of Tokyo,
Tokyo, Japan
Currently:
University of Tokyo,
Tokyo, Japan

Arriving Fellows – 2010-2011

Eric Eisner, M.D.

Eric, a native of California, attended Johns Hopkins University for undergraduate school, followed by medical school at the University of California – Davis. He then pursued his orthopedic residency at the University of Texas Southwestern in Dallas, Texas, which he will complete in June, 2010. He has been involved in several research projects while working in Dallas, particularly related to cartilage and chondrocytes. His other interests include golf and snow boarding.

Nirav Pandya, M.D.

Nirav grew up on the east coast and had his undergraduate education at the University of Chicago. This was followed by a medical degree at the same institution. He then took his orthopedic residency at the University of Pennsylvania where he has won many research awards, including the Greater Philadelphia OREF Resident Research competition. He also has an extensive list of publications. We welcome Nirav to our pediatric orthopedic fellowship.

Ryan Ilgenfritz, M.D.

Ryan, a native of Florida, attended the University of Miami for undergraduate school. This was followed by medical school at the University of Miami School of Medicine. He then went to the University of Iowa, where he is just completing his orthopedic residency. Ryan has been involved in the American Orthopedic Association leadership forum and was also voted as the best orthopedic teaching resident at the University of Iowa. His research has focused on spinal disorders as well as fractures. Other interests include fishing and spending time with his family.

Hilton Gottschalk, M.D.

Hilton is a native of Dallas, Texas, and received his undergraduate degree at the Texas A&M University in College Station, Texas. This was followed by medical school at the University of Texas Medical School in San Antonio. He then went to Dallas where he is currently an orthopedic resident at the University of Texas Southwestern Medical School. Hilton has earned many honors, both in graduate school and throughout his residency. He also has a significant list of orthopedic publications.

Arriving International Fellows

Abd Razak Muhamad, M.D.
Hospital Kuala Lumpur, Malaysa

Satoru Demura, M.D.
Kanazawa University, Japan

Future Fellows (2011-2012 Academic Year)

Christopher Bray, M.D.
Carolinas Medical Center

Eric Fornari, M.D.
Tufts Medical Center

Matthew Schmitz, M.D.
Air Force

Jacob Schulz, M.D.
Albert Einstein Medical Center

ASG Traveling Fellows

Austria, Swiss, German Fellows - program sponsored by AOA

The American Orthopedic Association (AOA), the most prestigious national leadership organization in North America representing the orthopedic specialty, selected Rady Children's Hospital San Diego to host the Austria-Swiss-German (ASG) Traveling Fellows for their Spring 2010 tour prior to the American Academy of Orthopedic Surgeons meeting in New Orleans. Rady Children's Hospital was selected for it's many areas of clinical and research expertise, with the visitors having a special interest in both spine surgery and hip surgery in children, adolescents, and young adults. They were particularly interested in the innovative work and laboratory studies performed by Dr. Harish Hosalkar of our hip unit.

This year's traveling fellows came from the German speaking countries of Europe and represent academic leaders from these centers who have had 5-10 years of practice experience. Their reason for traveling is to learn about North American centers, particularly the advanced centers who are leading the way with new clinical and research methods.

Drs. Hosalkar, Wenger, Mubarak and Edmonds of Rady Children's Hospital along with the ASG fellows (from German speaking countries of Europe).

The traveling fellows included:

- Christian Bach – Innsbruck, Austria
- Peter Aldinger – Stuttgart, Germany
- Stephan DeLank – Cologne, Germany
- Lorenz Buchler – Bern, Switzerland

The visiting surgeons enjoyed observing operations at Rady Children's Hospital and then presented several of their papers at a special research conference held in our Motion Analysis Laboratory. Social events included a hosted restaurant dinner at an Indian restaurant with Dr. Harish Hosalkar and a casual evening dinner at the home of Dr. Dennis Wenger, where informal academic interchange could occur.

We at Rady Children's Hospital San Diego and UCSD were honored to host the 2010 ASG Traveling Fellows and thank the American Orthopedic Association for the privilege.

Dr. Hosalkar hosting the ASG fellows at a local Indian restaurant.

Dr. Wenger and orthopedic staff hosting the ASG traveling fellows.

Notes from the Research Team

Tracey Bastrom, MA – Orthopedic Research Program Manager

We've had a very busy, exciting, and productive year! In 2009, our faculty/staff had 53 publications and contributed to 57 scientific presentations during the year.

As usual, we have a great group of fellows this year and all of us in the lab have enjoyed working with them. To detail all of their industrious efforts would take more than one page, so here are some highlights:

Robert Cho, MD worked on his primary project with Drs. Hosalker, Pring, and Wenger. He and our international fellow from Spain, Dr. Luis Morelada, reviewed our SCFE cases for evidence of acetabular retroversion. This manuscript has already been submitted for publication. Bob also worked with Drs. Newton, Yaszay, and the Harms Study Group to look at distal adding on in two sub-types of Lenke 1A patients. He will be presenting this in September at the SRS meeting in Kyoto.

Geordy Gantsoudes, MD continued the work on reviewing and following-up on talocalcaneal coaltions with Dr. Mubarak. An abstract was just sent in for the 2011 Academy meeting and a manuscript is in the works. Geordy also worked with Luis and Dr. Mubarak on the sensitivity/specificity of the C-sign in talocalcaneal coalitions compared to flatfoot deformity.

Robert Lark, MD looked at the displacement of midshaft clavicle fractures on plain x-ray versus CT scan with Dr. Hosalkar. They also evaluated the outcome of these fractures when treated operatively. Both abstracts were submitted for the 2011 Academy meeting. Rob worked with Drs. Yaszay, Newton, and the Harms Study group on a project evaluating outcomes of fusing the compensatory thoracic curve in primary thoracolumbar curves. He will be presenting this at the July IMAST meeting in Toronto.

Raymond Liu, MD did a very comprehensive review of type III supracondylar fractures and reported on the learning curve associated with pinning these fractures. This work was presented as an eposter at this years POSNA meeting in Hawaii. He also worked with the spine team and the biomechanics team on developing a method of assessing axial plane correction following scoliosis surgery by evaluating the differential rod curvature on lateral radiographs. This work will be presented as an e-poster during July's IMAST meeting.

"The Team"
We have an incredible team supporting the research efforts of the department. There are 5 full-time and 2 part-time staff assisting our faculty and fellows in their clinical research endeavors. In addition there are 5 full time staff members who comprise the Harms Study Group infrastructure for multicenter research studies. Contract and budgetary management support for all orthopedic research projects is provided by Kit Holm. The hard work and dedication of our team is clearly evident in the 35+ abstracts submitted on behalf of the department faculty for the 2011 AAOS meeting in San Diego.

Best wishes,

Tracey Bastrom, MA
Orthopedic Research Program Manager

(L to R) Aileen, Caitlin, Carrie, Rebecca, Maty, Joanna, Molly, Tracey, Sierra – Orthopedic Clinical Research Team

Orthopedic Biomechanics Research Center

Diana Glaser, PhD – Director

The Orthopedic Biomechanics Research Center (OBRC) is a state-of-the-art facility established in 1998. Since August last year, it is under the direction of Dr. Diana Glaser, PhD and continues its successful research path.

Successfully completed biomechanical studies include the analysis of vertebra fractures and their repair. The evaluation of stiffness and range of motion characteristics of different fusionless scoliosis correction techniques is another finished study with high clinical implications, since a compromised flexibility and function will not serve the purpose of fusionless treatment.

The lab completed a biomechanical study with Dr. Burt Yaszay and Christy Farnsworth to evaluate the application of negative pressure on closed primary spinal incisions. The study has been presented at multiple meetings (Wound Society SAWC, 37th Annual David H. Sutherland Pediatric Orthopedic Visiting Professorship, IMAST) and received Honorable Mention for best research poster at the University of California in San Diego. The publication is in process and the continuation of the study at a larger scale is being proposed.

Dr. Harish Hosalkar, our new hip surgery staff specialist, has a passion for research and found a match with Dr. Glaser, performing multiple studies within a few months of his arrival, including:

- Evaluation of the effects on hip cartilage subsequent to surgical hip positioning on fracture table
- Correlation of intra-capsular hip pressure with volume and position.
- The evaluation of a new reattachment point of the ligamentum teres in a porcine model (performed with the guidance of Dr. Wenger).
- The development of a new ratio in adolescent hips to classify offset.
- The characterization of the changes in the femoral physeal height-to-width index with rotation.

Future mutual projects include the evaluation of clavicle mechanics and the characterization of ligamentum teres properties in conjunction with UCSD.

Within this short time, OBRC has been able to receive its first society grant from POSNA for the "3D Analysis of the Deformation and Corrective Forces in the Spinal Rods for Scoliosis Correction". The first results of this study will be presented at the SRS meeting in Kyoto, Japan, in September.

The OBRC continues to provide support for the fellows to conduct research involving basic science. A study with Dr. Raymond Liu led to the development of a new method for assessing axial rotation based on the differential rod curvature of lateral radiographs.

A computational algorithm is being developed to support the research resident Dr. Eric Varley with his study of the analysis of the growth plate cellular characteristics. Together with the international fellow Dr. Takashi Ono, the lab approached the first step in developing a methodology for the 3D analysis of growth modulation.

In addition to following the steps needed to continue the previous important work in the lab, Dr. Glaser has begun to establish new research ideas implementing innovative technologies, including advanced 3D CT imaging for bone reconstruction as well as micro-CT for physis and end-plate evaluation.

Dr. Eric Edmonds and Dr. Diana Glaser submitted a very promising grant to OREF to evaluate the surgical treatment of recurrent patella instability of adolescent patients. Their study employs in vivo clinical evaluation in conjunction with a multi-parametric set of experiments: clinical questionnaire, radiographic evaluation, motion analysis, and mathematical modeling.

New studies are being developed employing the novel EOS 3D technology, the unique CAVE virtual reality environment and the micro-CT capabilities shared with UCSD paired with computational modeling and analysis.

OBRC wants to say 'goodbye and good luck' to Thomas Nunn, who worked as an engineer in the lab and is now finishing his MS at UCSD. We also want to welcome our new research engineer, Josh Doan, MS.

Josh Doan, Christy Farnsworth, Diana Glaser, Eric Varley – Orthopedic Biomechanics Lab Research Team.

Lena Sefton Clark Endowed Fellowship in Pediatric Orthopedics

Dr. Liu accepting the Lena Sefton Clark symbolic "white coat" from Kathleen Sellick, CEO of RCHSD.

The legacy of Lena Sefton Clark is reaching far beyond the century mark.

Mrs. Clark built a strong foundation for our hospital philanthropy through the annual Charity Ball, now a century old. In 2007 her family created the Lena Sefton Clark Endowed Fellowship in Pediatric Orthopedics to keep her ideals alive. The endowment creates a perpetual source of funding to support education, training and research for generations of physicians to come – and the countless children they will care for. Mary Clark, the daughter-in-law of Lena Sefton Clark, presented this year's fellowship award to Dr. Raymond Liu on June 25, 2010.

Dr. Liu, a Los Angeles native, had his medical education at Johns Hopkins University in Baltimore and his orthopedic residency at Case Western Reserve University in Cleveland.

Interested in medicine from a young age, Dr. Liu has had an outstanding exposure to the leading educational centers in North America and the world. While at Case Western Reserve as an orthopedic resident he completed many important research projects, and even before he came here to San Diego for his fellowship, he was selected to return to Cleveland to join their academic faculty.

During his time here Dr. Liu has completed important research projects both on scoliosis and spinal disorders in childhood as well as outcomes studies related to the quality of orthopedic trauma care in relation to the experience and seniority of surgeons.

Finally, Dr. Liu was selected because of his immense work ethic and faultless attention to detail, not only in caring for patients but also in preparing for surgery and orthopedic conferences. His work ethic and style exemplifies the ideal pediatric orthopedic fellow, thus his earning the title of the Lena Sefton Clark Endowed Fellow in Pediatric Orthopedics.

Dr. Wenger, Mary Clark, Dr. Liu,
Kathleen Sellick (CEO), and Dr. Mubarak

Rady Children's Hospital – San Diego Opens 10/10/10!

Rady Children's Hospital's new 279,000 square foot, $350 million Pavilion will include 16 new state-of-the-art operating rooms, with the latest technology to conduct pediatric surgeries. The facility will include private patient rooms outfitted with foldout sofa beds, internet connections, and other amenities that will allow parents to be closer to their children. The hospital will be environmentally friendly with "green" technology and will be one of the only Leadership in Energy and Environmental Design (LEED) certified hospital buildings in California. This special year, 2010, allows an auspicious opening date, "10/10/10".

May 2008

May 2009

June 2010

New Rady Children's Hosptial – Almost complete

37th Annual David H. Sutherland Visiting Professorship

John C. (Joe) Hyndman, M.D.
Halifax, Nova Scotia, Canada

Dr. Joe Hyndman, an internationally recognized expert in children's orthopedic surgery, currently serves as Chief of the Department of Orthopedics at the IWK Health Centre and Professor of Surgery at Dalhousie University in Halifax.

A native of Prince Edward Island, Canada, Dr. Hyndman attended Prince of Wales College in Charlottetown, Prince Edward Island, as an undergraduate, and then Dalhousie University for his medical degree. After a basic surgery residency in Halifax, he then went to the University of British Columbia where he completed his orthopedic residency in Vancouver, with subsequent certification by the Royal College of Surgeons of Canada. He then took his fellowship in pediatric orthopedics at the A.I. DuPont Institute in Wilmington, Delaware. Following that he returned to Dalhousie University where he currently serves as a professor of surgery and chief of orthopedics.

Dr. Hyndman has a lengthy curriculum vitae related to his academic work, and has lectured widely throughout North America and the world. He is especially recognized for his interest in orthopedic trauma. Academic and political activities include many positions in the Canadian Orthopedic Association. He has also served as an oral examiner for the Royal College of Surgeons (Orthopedics). His hobbies include ice hockey, golf and travel.

2009-2010 fellows and Dr. Hyndman

Dr. Hyndman and Dr. Mubarak

Fellows plus Dr. Hyndman

37th Annual David H. Sutherland Visiting Professorship - 2010

Photographs from Western Orthopedic Association – Rady Children's Hospital Orthopedic Department evening dinner – UCSD faculty club on April 22, 2010.

Joe Hyndman's visiting professorship was a great hit. His congenial attitude and practical approach to disease was enjoyed by all, ranging from medical students to fellows and senior staff. His Western Orthopedic Association dinner talk, entitled "Universal Health Care – Observations from a 40 Year Provider" described the Canadian system in detail and gave us much to think about.

In addition, his pediatric Grand Rounds lecture on "The Limping Child" was a fantastic clarification of how simple technology can be used to objectively assess even obscure problems.

The David Sutherland Visiting Professorship in San Diego continues to be the highlight of the clinical care and academic year at Rady Children's Hospital San Diego.

Raymond Liu, Doug Wallace, Robert Cho, Harish Hosalkar

John Schlecter, Scott Van Valin (former fellows), Dennis Wenger, Shyam Kishan (former fellow), Harish Hosalkar

Special Announcement
– 2011 David Sutherland Visiting Professorship
April 21 & 22, 2011

We are delighted to announce that our visiting professor for 2011 will be the outstanding Professor of Orthopedic Surgery, Dr. Benjamin Joseph from Kasturba Medical College in Manapal, India. Dr. Joseph is currently doing a two year locum tenens pediatric orthopedic practice in New Zealand. As many of you know, he has just completed the textbook entitled: Pediatric Orthopedics – A System of Decision Making, along with Randall T Loder, Ian Torode and Selvadurai Nayagam.

Next year's visiting professorship will certainly be a landmark event and we look forward to having many of our former fellows returning for this occasion.

Ana Cunha (international fellow) presenting her reearch work.

Dennis Wenger and Joe Hyndman

Notes From a Former Fellow

Scott Nelson, M.D. – Dominican Republic
(Fellow – 2002-2003)

As the ground shook on my way home from work in Santo Domingo on that January 12 afternoon I was amused and delighted to experience one of the familiarities of California. Little did I realize that the 4th deadliest earthquake in world history had just occurred on our island 160 miles to the west. As reports started emerging I realized it was time to mobilize. Having worked in Haiti on 19 previous trips we were able to quickly prepare the necessary surgical equipment and assemble our team consisting of a pediatrician, anesthesiologist, and nurse. With news crews yet to arrive and no functioning communication systems it was like going into a black hole. Security, accommodations, food, water and transportation were all unknowns. We prepared ourselves a two day supply of food and water and had no return ticket.

Scott has served as the medical director for the Cure International Children's Orthopaedic Hospital in Santo Domingo during the last five years and since the January 2010 earthquake has been working in Port au Prince. Later this year he will return to Loma Linda University as the Chief of Pediatric Orthopaedics.

Less than 48 hours after the disaster our small plane, heavily loaded, slowly lifted off heading towards Port au Prince where the airport had just been shut down by the US military. After circling the airstrip 20 times we were able to get clearance to land the plane for five minutes.

We made a steep descent, unloaded our equipment onto the airfield and our pilot quickly returned to the air. Due to providential circumstances we found transportation to a nearby hospital and immediately began to work. Among the casualties we found a four year old boy about to have his arm amputated by a well intentioned local ophthalmologist. Our first operation began at that moment by treating his open lateral condyle fracture and salvaging the arm. There were hundreds of languishing patients, most of whom were lying outside due to fear of aftershocks. Many of them were developing gangrene, some dying, and others already dead. It was utter chaos and there was no immediate help in sight. With the overwhelming number of injuries it was difficult to know where to start.

During the first few days the situation went from bad to worse. The many injured patients were developing infections and gangrenous limbs faster than we could operate. A couple of days after we began operating, the stench of death strengthened and permeated the hallways and courtyards of the hospital. Dead limbs still attached to patients, dead bodies, and amputated parts all contributed. Slowly we were able to overcome this and each day the hospital seemed to metamorphose. Patients were operated, volunteers showed up with bleach, halls were cleaned and chaos was organized little by little. Our intentions of returning several days later have now lasted nearly 6 months and in reality this is just the beginning of the work that needs to be done.

The education I was given at San Diego Children's Hospital was invaluable in preparing me to meet the challenges of work abroad. I would like to give gratitude to Dr. Wenger for teaching me the following methods which were especially useful during the Haiti relief efforts:

- Operate efficiently – know that operations have fast and slow parts, and the surgeon must know the difference. Wound closure should be an efficient part of the operation.
- Don't dictate operative reports or eat meals between cases
- Continue to talk in an evenly flowing eloquent tone even during stressful cases
- All concentration should be focused on efficient use of the O.R. – sometimes requiring surgeons to help the nurses prepare for the next case.

As time has progressed, refinement has occurred and we are rebuilding infrastructure here at Hôpital Adventiste d'Haiti. The methods taught to me by each and every one of our San Diego professors are being put to use and taught to others. Ponseti casting, pedicle screws, tibialis posterior tendon transfers Mubarak style, CP surgery, straightening bowlegs, C3 osteotomies and many other techniques are being implemented on a daily basis.

Perhaps even more important than the techniques taught are the relationships formed. Our respected teachers that I still rely on for advice have become friends and led to other friendships and professional relationships in the larger pediatric orthopaedic community. I am grateful to the continued support of the faculty as well as alumni who have made trips to the Dominican Republic and Haiti to support our work here and refine my surgical skills and knowledge. Dr. Chambers has made multiple trips and been a great support. Dr. Wenger holds the Dominican record for doing six pelvic osteotomies in one day. Amongst others, Jon Davids, Maya Pring, John Schlechter, Rocky Sanchez, George Gantsoudes, and Afshin Aminian have all volunteered their services over the last five years. My emotions of gratitude for all were summed up when Karl Rathjen chartered a 737, bringing an entire team and 8000 lbs of surgical equipment several days after the earthquake. As the twin turbines shut down and the cargo doors of that plane opened on the Port au Prince tarmac I was swept by emotion. It is with this emotion of gratitude that I negate credit to myself and give thanks to all those who have helped.

The last few months in Haiti have just been a small part of the overall experience. Needs are overwhelming and I have fewer answers and more questions now than I did when I arrived more than five years ago. In any case, doing small things with love is more important than trying to fix the world. We must continue to risk, dream and love.

Because of this fellowship, top quality expertise and services are being brought to the underserved and underprivileged in far parts of the world. Being on the front lines and and experiencing the appreciation and fortitude of those served is a great reward, but the real credit belongs to those that are treating Yuppies in San Diego and training fellows, as their challenges are often times much greater and their influence much broader.

Scott Nelson, MD

Pediatric Orthopedic Society of North America (POSNA) Meeting, Hawaii – 2010

The Pediatric Orthopedic Society of North America's annual meeting was held in the Kona area on the Big Island of Hawaii from May 3-7, 2010. As usual, Rady Children's Hospital San Diego was well represented with multiple academic papers presented on the program with many of the faculty participating in the additional afternoon seminars related both to common children's orthopedic problems to issues as complex as physician extenders and business management issues.

We wish to congratulate all of our staff members who presented papers there and participated in the main meeting and the pre-meeting symposium on trauma, which was chaired by Dr. Eric Wall, Chairman of Children's Orthopedics at Cincinnati Children's Hospital and a former UCSD resident who we know well. In addition, the main program was directed by annual program director Dr. Steven Frick, who is a former fellow in the Rady Children's Hospital/UCSD orthopedic program (1996).

As noted in the cover letter for this issue, the 2010 POSNA program was a very special time for Rady Children's Hospital San Diego because Dr. Peter Newton was nominated to the position of Second Vice President, which means he enters the presidential line and will become the president of the prestigious organization two years from now. Our congratulations to Peter.

Soon to be POSNA president, Dr. Peter Newton and his wife Cathy at evening dinner

Also, Dr. Scott Mubarak delivered the Presidential Guest Lecture entitled "Hawaii – First Contact".

John Dormans, presents Scott Mubarak a plaque honoring him for his Presidential Guest Lecture "Hawaii, First Contact"

In addition, Dr. Eric Edmonds, one of our sports medicine faculty members, was awarded the St. Giles Young Investigator's Award for his innovative work in sports medicine research. This financial award will help him further develp his research projects here at Rady Children's Hospital.

Dr. Edmonds receiving the St. Giles Young Investigator's Award

We are very proud of the accomplishments of our entire orthopedic staff, and particularly of those who achieved the above honors.

RCHSD/UCSD Peds. Ortho Fellowship Alumni Reunion – May 2010 – Hawaii

Another highlight of the meeting was the annual orthopedic fellow alumni program, hosted by Tracey Bastrom, our research coordinator. A large number of our alumni from throughout the United States and the world were able to attend this evening event, along with our nurse practitioners, residents, fellows and staff who were attending the meeting. The photos below demonstrate the conviviality of this important gathering for prior fellows.

Dr. Afshin Aminian – Children's Hospital Orange Co, Dr. Dennis Wenger – San Diego, Dr. Vineeta Swaroop – Chicago

Dr. John Schlechter – Children's Hospital Orange Co., Tracey Bastrom – San Diego, Dr. Eric Edmonds – San Diego

Dr. Adam Barmada – Portland, Dr. Shyam Kishan – Loma Linda University (now Indiana University), Dr. Peter Newton – San Diego

Dr. Meghan Imrie – Stanford University, Dr. Vineeta Swaroop – Chicago

Dr. Scott Van Valin - Milwaukee, Dr. Jay Albright – Orlando, Dr. Scott Mubarak – San Diego

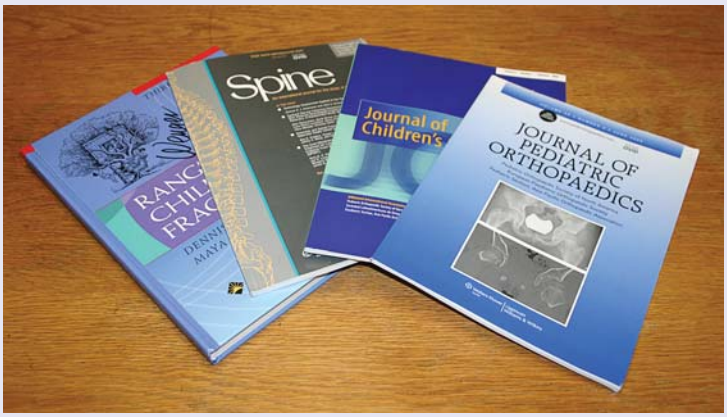
Dr. RJ Aravandar – Singapore, and Dr. Peter Newton – San Diego

Dr. Eric Edmonds – San Diego, Dr. Rob Lark – San Diego and Amy Lark - Durham, North Carolina, Dr. Jay Albright – Orlando, Dr. Peter Newton – San Diego

Dr. Scott Mubarak – San Diego and Dr. Christine Caltoum - Indianapolis

Dr. Dennis Wenger – San Diego, Dr. Peter Newton – San Diego, Cathy Newton – San Diego, Dr. Francois Lalonde – Children's Hospital Orange Co.

Documentation
(Our Publications)



The Rady Children's Hospital-University of California San Diego orthopedic program continues to be one of the top centers in the world for children's orthopedic clinical and biomechanical research. Our work is published in the most important orthopedic journals in the world and is widely quoted. Below are listed the publications produced by our department from July, 2008, through December, 2009.

1. Aguinaldo, A. L., and Chambers, H.: Correlation of throwing mechanics with elbow valgus load in adult baseball pitchers. Am J Sports Med, 37(10): 2043-8, 2009.

2. Arkader, A.; Glotzbecker, M.; Hosalkar, H. S.; and Dormans, J. P.: Primary musculoskeletal Langerhans cell histiocytosis in children: an analysis for a 3-decade period. J Pediatr Orthop, 29(2): 201-7, 2009.

3. Baldwin, K. D.; Babatunde, O. M.; Russell Huffman, G.; and Hosalkar, H. S.: Open fractures of the tibia in the pediatric population: a systematic review. J Child Orthop, 3(3): 199-208, 2009.

4. Ballock, R. T.; Newton, P. O.; Evans, S. J.; Estabrook, M.; Farnsworth, C. L.; and Bradley, J. S.: A comparison of early versus late conversion from intravenous to oral therapy in the treatment of septic arthritis. J Pediatr Orthop, 29(6): 636-42, 2009.

5. Barwood, M. J.; Newton, P. S.; and Tipton, M. J.: Ventilated vest and tolerance for intermittent exercise in hot, dry conditions with military clothing. Aviat Space Environ Med, 80(4): 353-9, 2009.

6. Bhat, S. B.; Kamath, A. F.; Sehgal, K.; Horn, B. D.; and Hosalkar, H. S.: Multi-axial correction system in the treatment of radial club hand. J Child Orthop, 2009.

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15. Duong, L.; Cheriet, F.; Labelle, H.; Cheung, K. M.; Abel, M. F.; Newton, P. O.; McCall, R. E.; Lenke, L. G.; and Stokes, I. A.: Interobserver and intraobserver variability in the identification of the Lenke classification lumbar modifier in adolescent idiopathic scoliosis. J Spinal Disord Tech, 22(6): 448-55, 2009.

16. Edmonds, E. W.; Capelo, R. M.; Stearns, P.; Bastrom, T. P.; Wallace, C. D.; and Newton, P. O.: Predicting initial treatment failure of fiberglass casts in pediatric distal radius fractures: utility of the second metacarpal-radius angle. J Child Orthop, 3(5): 375-81, 2009.

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Spreading the Word – Global Outreach

The Rady Children's Hospital – UCSD orthopedic faculty continue to be involved in education and research efforts throughout North America and the world.

Hank Chambers, Haiti relief – Hopital Sacre Coeur in Milot, Haiti – Jan. 2010

Dr. Mubarak with host staff – orthopedic conference – King Khalid College of Medicine – Riyadh, Saudi Arabia – Winter 2010

Dr. Jose Burgos, Director of Orthopedic Programs, Ramon y Cajal Hospital – Madrid; Dr. David Farrington – Seville; Dr. Dennis Wenger, Invited Guest Professor – Hip Osteotomy Instructional Course – Madrid, Spain – May, 2010

Dr. Harish Hosalkar and other senior staff at the Pediatric Orthopedic Society of India meeting -- January, 2010

Dr. Mubarak and Dr. Zamam (host) at orthopedic conference in Riyadh, Saudi Arabia

Dr. Dennis Wenger, Visiting Professor, and Dr. Ken Noonan, Chairman of Orthopedics at American Family Children's Hospital at the University of Wisconsin Medical Center – Madison, WI – Fall, 2009

Dr. Peter Newton in Beijing for the Elevating Best Practice in Spinal Surgery meeting, 2010

Hank Chambers, Veronica Abdala, and Jonathon Phillips – SLAOTI meeting, Vina del Mar, Chile – Nov. 2009

Dr. Mubarak and staff plus residents. Chiba Children's Hospital – Chiba, Japan – Spring, 2010