



## A Report from the Pediatric Orthopaedic Surgery Program at The Children's Hospital of Philadelphia



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### Welcome Message

Greetings from the Pediatric Orthopaedic Surgery Division of the Children's Hospital of Philadelphia! The CHOP pediatric orthopaedics faculty had an exceptional year in 2010-2011. Existing subspecialty programs continue to grow, improving the quality and availability of care for our young patients.

The Division of Orthopaedic Surgery is pleased to announce the recent hire of one of the top musculoskeletal basic science research teams in the United States: Dr. Maurizio Pacifici (Figure 1a), Dr. Motomi Enomoto-Iwamoto (Figure 1b), Dr. Masahiro Iwamoto (Figure 1c), and Dr. Eiki Koyama (Figure 1d). This team of researchers comes to CHOP from Thomas



**Figure 1.** Maurizio Pacifici, Ph.D (A); Motomi Enomoto-Iwamoto, D.D.S., Ph.D (B); Masahiro Iwamoto, D.D.S., Ph.D (C); Eiki Koyama, D.D.S., Ph.D (D).

Jefferson University. Their presence in our department will lay the framework for the development of a vibrant basic and translational musculoskeletal research program here at CHOP. More specifically, this program will promote and establish a community of physicians and scientists who are knowledgeable of clinical and basic research interests and who are motivated to work together in order to understand the pathogenesis and treatment of musculoskeletal diseases.

The Children's Hospital of Philadelphia as a whole also continues to thrive. In 2010, *U.S. News and World Report* ranked CHOP as the top hospital for the 8<sup>th</sup> consecutive year (Figure 2).



**Figure 2.** US News and World Report.

The Children's Hospital of Philadelphia expanded in June 2010 with the addition of the Ruth and Tristram Colket Jr. Translational Research Building, located at 3501 Civic Center Boulevard (Figure 3). This twelve story building will contain multiple, highly innovated laboratories designed to further advance the translational research currently being conducted



**Figure 3.** Ruth and Tristram Colket Jr. Translational Research Building (A & B).

at CHOP, while simultaneously promoting collaboration between subspecialty departments.

The Children's Hospital of Philadelphia will expand even further to accommodate for an Ambulatory Care Center (ACC) dedicated to providing outpatient-care facilities. Construction is expected to begin in 2015 and end in 2017.

### Clinical Program

To date, our orthopaedic faculty includes nineteen total providers: seventeen specially trained pediatric orthopaedic surgeons (thirteen operative and four non-operative), and two pediatricians with sports medicine training. Our department also staffs seven nurse practitioners, four registered nurses, four physician's assistants, three cast technicians, and two athletic trainers who are able to evaluate, diagnose, and treat the full range of musculoskeletal disorders, as well as a staff of 42 office personnel.

We are pleased to announce that Dr. John Todd Lawrence (Figure 4) has joined our team in August. Dr. Lawrence completed his medical training at the University of Pennsylvania. While there, he also earned a Ph.D. in Cell and Molecular Biology. He stayed at the Hospital of the University of Pennsylvania to complete his residency training in orthopaedic surgery. Dr. Lawrence then trained as a fellow in pediatric orthopaedic surgery at CHOP.



**Figure 4.** John Todd Lawrence, MD, PhD.

He completed a second fellowship in Sports Medicine and Shoulder Surgery at Duke University in Durham, N.C where he had an opportunity to care for the 2010 NCAA Men's Basketball Championship team. He has now returned to join the growing team of sports medicine specialists within CHOP. Dr. Lawrence has a highly specialized skill set and is dedicated to the care of high-level pediatric and adolescent athletes. He has particular expertise in the arthroscopic treatment of injuries to the knee, shoulder, elbow and ankle.

The Center for Thoracic Insufficiency Syndrome (CTIS) at CHOP, directed by Dr. Campbell, continues to develop its clinical multi-specialty approach to children with complex spine and chest wall deformity with a 30% increase in VEPTR thoracoplasty surgeries over the past year. CTIS now has a Foerderer grant to study dynamic lung imaging of normal children to gain normative data for use of this imaging technique in gauging thoracic performance, and a second grant from the National Organization of Rare disorders (NORD) to study risk factors for Thoracic Insufficiency Syndrome in Larsen syndrome.



Figure 5. Scott McKay, MD (A); Ryan Murdock, MD (B); Peter Glavas, MD (C).

## Teaching

We currently have six funded, one-year fellowship positions: three clinical fellowships and three research fellowships. The 2010-2011 clinical fellows are Dr. Scott McKay, Dr. Ryan Murdock, and Dr. Peter Glavas (Figure 5 A-C). Our research fellows are Dr. Juan A. Pretell from Peru (Figure 6A), who is focusing his research on trauma and oncology based studies; and Dr. Ali Ahmad Al-Omari from Jordan (Figure 6B), who is studying the management of pediatric spinal and hip related disorders and injuries.

The Department of Orthopedic Surgery is happy to announce that it will be collaborating with the Department of Pediatrics to sponsor a primary care (non-operative) sports medicine fellowship. This will be one of only a few pediatric primary care sports medicine fellowships in the country. Fellows will be trained in all aspects of sports medicine including sideline management of acute injuries, concussions, musculoskeletal injuries, diagnostic ultrasound and event planning. The anticipated start date is July 2011.

The Division of Orthopaedic Surgery continues to reach out to the international community of specialists by participating in the Visiting International Scholars Program



Figure 6. Juan Pretell, MD (A); Ali Al-Omari, MD (B).

(VISP), a program advertised by the International Center for Orthopaedic Education ([www.icoe.aoassn.org](http://www.icoe.aoassn.org)).

## Research

The CHOP Orthopaedic Surgery division currently has over 90 ongoing, active clinical research and basic science projects. Our pediatric orthopaedic faculty continues to present research studies at orthopaedic conferences around the world, including the American Association of Orthopaedic surgery (AAOS), the Pediatric Orthopaedic Society of North America (POSNA), the European Pediatric Orthopaedic Society (EPOS), the Scoliosis Research Society (SRS), the American Orthopaedic Society for Sports Medicine (AOSSM), the Musculoskeletal Tumor Society (MSTS), and many more.

In 2009, our department initiated an annual Benjamin Fox Scholarship Award for medical students who are interested in conducting research for a year within Orthopaedics. In June, our department awarded Nicholas Beck and Neeraj Patel, both upcoming 4<sup>th</sup> year medical students, this year's recipients of the scholarship. Nicholas is working on studies relating to distal radius and t-condylar fractures in children, sports injuries including ACL and meniscus tears, hip reconstruction in patients with cerebral palsy, and diagnosis of spondylolysis in children with back pain. Neeraj is working on studies related to pediatric ACL reconstruction, Monteggia fractures, discoid lateral meniscus, the use of the O-arm in scoliosis surgery, tibial spine fractures, and musculoskeletal MRSA infections.

## Recognitions and Achievements

Our attendings have assumed several leadership roles within the pediatric orthopaedic community. Dr. Robert Campbell was recognized for his achievements in the development of the VEPTR, and his dedication to improving the lives of children with chest wall deformity (Thoracic Insufficiency Syndrome) by a Congressional Resolution 1499.

Dr. John Flynn was the chairman of the 2010 International Pediatric Orthopaedic Symposium (IPOS) in Orlando, Florida. This conference attracted over 341 registrants, an increase in 100 participants from last year, and included lectures on a large variety of orthopaedic pediatric topics. Dr. Flynn also co-edited Rockwood and Wilkins Fractures in Children and Operative Techniques in Orthopaedic Surgery, and was lead editor of the AAOS publication Orthopaedic Knowledge Update (OKU) 10.

Dr. Lawrence Wells was promoted to Associate Professor of Orthopaedic Surgery at the University of Pennsylvania School of Medicine, effective July 2011. Dr. Wells has also been appointed safety officer within CHOP's Department of Surgery. In 2010, he served as Chair of the Pediatric Orthopaedic Society of North America (POSNA)'s Specialty Day Course, an event that attracted 300+ participants.

Dr. Theodore Ganley, the Sports Medicine Director at CHOP, chaired the POSNA 2010 Annual Meeting Pediatric Sports Medicine Symposium. He also served as the Co-Director of the American Academy of Orthopaedic Surgery (AAOS) / Pediatric Orthopaedic Society of North America's (POSNA)'s Pediatric Sports Medicine Course entitled "Cutting Edge Techniques in Sports Surgery for Children and Adolescents". Dr. Ganley was also the moderator/director of the 2010 AAOS Annual Meeting Instructional Course Lecture entitled "Pediatric Sports Medicine: Operative Challenges and Solutions". In 2010, Dr. Ganley was named a member of the "Osteochondritis Dissecans Guidelines: Evidence Based Medicine" committee which published its findings in December 2010. Dr. Ganley

has also co-authored two chapters for inclusion within the Orthopaedic Knowledge Update (OKU) textbook. The first chapter, included within OKU 4, was entitled "Juvenile Osteochondritis Dissecans"; the second chapter, included within OKU 10, was entitled "Injuries and Conditions of the Pediatric and Adolescent Athlete".

This year, Chief Emeritus Dr. Denis Drummond has celebrated his 25<sup>th</sup> anniversary working in CHOP Orthopaedics.

Dr. Robert Carrigan, our department's recently appointed hand and upper extremity surgeon, and his wife welcomed their first child, Benjamin, in September.

Dr. John Dormans, current Chief of Orthopaedic Surgery at CHOP, has recently finished his term as President of the Pediatric Orthopaedic Society of North America (POSNA). He has recently been elected President of the United States section of the Société Internationale de Chirurgie Orthopédique et de Traumatologie (SICOT) for the 2010 - 2012 term, and continues to serve as the President of Children's Surgical Associates (CSA) at CHOP. He has also been named the Richard M. Armstrong Junior Endowed Chair in Pediatric Orthopaedic Surgery.