## Overview

Continuity gives us roots; change gives us branches, letting us stretch and grow and reach new heights.

— Pauline R. Kezer

Terry Peabody, MD, has unexpectedly left the University of Chicago to become the Chairman of the Department of Orthopaedic Surgery at Northwestern after 17 years of superb service. Following his departure, the Dean of BSD and EVP of the University of Chicago, Kenneth Polonsky, MD, with the support of the Chair of the Department of Surgery, has initiated a process to quickly make Orthopaedic Surgery an independent department. Outside consultants of national renown confirmed the need to create a Department to maintain, and even improve, our local, regional and national reputation that we have developed in the past two decades.

Intersecting this situation, there is new and invigorating leadership across the Medical Center almost entirely composed of leaders from other nationally renowned academic medical centers. There will be an emphasis on clinical care to support the academic mission of research and education. New internal governance structures are being put into place and an inpatient surgical and oncology New Hospital Pavilion with 28 new ORs will be occupied in about 12 months. All of these changes have put Orthopaedic Surgery in the spotlight and position to quickly grow significantly. In the Chicago Metro area, significant fragmentation of Orthopaedic Surgery care is in the process of being consolidated. Leadership understands that Orthopaedic Surgery is not only an excellent but easy clinical program to grow. Orthopaedic Surgery has vast patient demands/needs and little competition in south Chicago, the south suburbs and Northwest Indiana.

The immediate vision is to double the size of the full-time orthopaedic surgical faculty; mostly in adult reconstruction, spine, sports medicine and shoulder. In addition, off-site locations in Matteson have already been enhanced, and the South Loop and Northwest Indiana are targeted for multi-disciplinary University support sites of care. All of these facilities are to provide ambulatory care, outpatient surgery, significant imaging capabilities and physical therapy. In conjunction with the creation of a new Department, research efforts will also be doubled, and the entity will provide opportunities to raise funds for grateful patients to support named professorships and research.

During this academic year, I expect that Orthopaedic Surgery will formally become a Department, a robust national search for a chair will be initiated in the Dean’s Office, and quite possibly, a new Chair will be named.

Michael A. Simon, MD
INTERIM CHIEF, ORTHOPAEDIC SURGERY + REHABILITATION MEDICINE

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**WHAT’S NEW? THIS YEAR’S ANNUAL REPORT FEATURES PHOTOS OF SOME NEW BUILDINGS ON CAMPUS, SHOWCASING THE EXCITING CHANGES HAPPENING AT THE UNIVERSITY OF CHICAGO. PICTURED HERE IS A NIGHTTIME SHOT OF THE NEW JOE AND RIKI MANSUETO LIBRARY. ON THE COVER: THE CHARLES M. HARPER CENTER/BOOTH SCHOOL OF BUSINESS.**
JOVITO ANGELES, MD  Dr. Angeles joined the busy Pediatric/Hand service at the University of Chicago in March of 2011. Dr. Angeles specializes in hand and upper extremity surgery with a special interest in biomechanics of the hand, bone stabilization devices and nerve regeneration. He is a fellow of the American Academy for Cerebral Palsy and Developmental Medicine. He is also a member of the International Society for Brachial Plexus and Peripheral Nerve Injury.

ROBERT BIELSKI, MD  Dr. Bielski continues as an examiner for the American Board of Orthopaedic Surgery. He is also a reviewer for the Journal of Bone and Joint Surgery. Dr. Bielski was an invited lecturer at the 2011 Midwest Podiatry Conference held in Chicago in March. He was also a faculty contributor at the Annual Primary Care Orthopaedics Course in June 2011.

RODERICK BIRNIE, MD  Dr. Birnie continues his busy clinical practice in hand and upper extremity at the University of Chicago. He was a faculty contributor for the Annual Primary Care Orthopaedics Course chaired by Dr. Sherwin Ho. Last year, Dr. Birnie was President of the Chicago Society for Surgery of the Hand.

HENRY FINN, MD  Dr. Finn continues in his role as the Medical Director for the Chicago Center for Orthopaedics at Weiss. With the administration at Weiss Memorial Hospital, he has created the Chicago Center for Orthopaedics (CCO). The CCO includes almost 30 orthopaedic surgeons covering all of the orthopaedic subspecialties and educating three fellows and over 40 residents per year and has affiliations with three academic programs. Dr. Finn has set out to create a convenient, supportive experience for orthopaedic patients. From an easily accessible location to a care coordinator who handles any situation for patients, the focus is on making patients feel comfortable while providing them state-of-the-art orthopaedic care. The mission statement is “Redefining the practice of orthopaedic surgery where the patient experience is our number one priority.” Dr. Finn was the recipient of the 2010 Wilkes University Health Sciences Distinguished Service Award. Dr. Finn was part of the Class of 1980 of Wilkes University.

PURNENDU GUPTA, MD  Dr. Gupta continues to be active in the Scoliosis Research Society. He is an Editor for spine topics in the American Journal of Sports Medicine and the Archives of Physical Medicine and Rehabilitation, Clinical Biomechanics and Clinical Orthopaedics and Related Research. Dr. Gupta continues in his role as Director of the University of Chicago Spine Center at Weiss Hospital.

REX HAYDON, MD, PhD  Dr. Haydon was this year’s recipient of the Gerald R. Laros Teaching Award. He was also named Program Director for the Orthopaedic Oncology Fellowship at the University of Chicago. He is a monthly lecturer at Loyola University Chicago for the Department of Orthopaedic Surgery on Orthopaedic Oncology. Dr. Haydon was the keynote speaker at the Pritzker School of Medicine White Coat Ceremony. He also gave a presentation on Orthopaedic Oncology at the University of Chicago’s Annual Primary Care Orthopaedics Conference held in Chicago this past June. Dr. Haydon also continues as co-instructor for the annual Musculoskeletal Clinicopathologic Seminar for residents held at the Gleacher Center, Chicago and is the course director for the Orthopaedic Basic Science Curriculum.

TONG-CHUAN HE, MD, PhD  Dr. He’s molecular oncology lab continues research on cancer, stem cells and bone biology. He continues with collaborative efforts with other faculty in the areas of tendon and ligament repair research, articular cartilage regeneration research, and implant wear-induced osteolysis and spine research. Dr. He is a member of the Committee on Molecular Medicine, the Committee on Cancer Biology, the Committee on Genetics, and the Committee on Cell Physiology at the University of Chicago. He is an Adjunct Professor, School of Bioengineering, Chongqing University, China. Dr. He is also a member of the International Chinese Hard Tissue Society.

SHERWIN HO, MD  Dr. Ho is President of the Illinois Association of Orthopaedic Surgeons (IAOS), having previously served on the Board of Councilors, President-elect, and editor of the newsletter. This was the 18th year of Dr. Ho’s successful University of Chicago Annual Primary Care Orthopaedics Conference. Dr. Ho also continues...
in his role as Program Director for the Sports Medicine Fellowship at the University of Chicago.

J. MARTIN LELAND, MD  Dr. Leland has completed a very active and successful year at the University of Chicago. In addition to achieving board certification in Orthopaedic Surgery, he continues to be very active with his clinical and academic endeavors. His busy clinical practice has included a number of complex orthopaedic sports medicine surgeries, such as multi-ligament knee reconstructions, proximal hamstring repairs, total shoulder replacements and arthroscopic surgery of the knee, shoulder, hip and elbow.

Dr. Leland regularly teaches orthopaedic surgeons, resident physicians in a variety of different specialties, occupational and physical therapists, and medical students in local, regional and national settings. He lectures on a variety of different topics, including new techniques in anterior cruciate ligament (ACL) reconstruction and shoulder arthroscopy. Dr. Leland has served as a faculty member for numerous “hands-on” teaching courses sponsored by the Arthroscopy Association of North America (AANA) and the American Academy of Orthopaedic Surgeons (AAOS). He is a member of the American Orthopaedic Society for Sports Medicine (AOSSM) Self Assessment Committee and is a principal reviewer for The American Journal of Sports Medicine, the most popular orthopaedic sports medicine publication in the world. Dr. Leland continues to serve as a co-director for the University of Chicago’s Annual Primary Care Orthopaedics Conference, held every year in June in Chicago.

Dr. Leland stays very involved with the University of Chicago through his work as a summer research mentor for medical students and his involvement with the Department of Surgery’s “Integrated OR” Committee for the New Hospital Pavilion, as well as the Communications Faculty Committee. He continues to work actively with Concordia College and numerous local high schools.

HUE LUU, MD  Dr. Luu continues to review grants for the American Cancer Society, OREF, and the Liddy Shriver Foundation. This past year he completed his ORS/Aaos Career Development Traveling Fellowship. It was rewarding with ample opportunities to meet with mentors and collaborators. He visited the University of Rochester, University of Toronto and the University of Alabama Birmingham. Dr. Luu’s major area of focus for research is on Insulin-Like Growth Factor Binding Protein 5 (IGFBP5). A senior author paper has been published in Oncogene on the role of IGFBP5 in osteosarcoma. A second paper should be submitted by December 2011.

DAVID MANNING, MD  Dr. David Manning was promoted to Associate Professor of Surgery. Dr. Manning continues to speak nationally regarding minimally invasive joint replacement, postoperative pain management and revision hip and knee arthroplasty, including faculty at the “Back to Basics: Hip and Knee” course co-sponsored by ICJR and the Mid America Orthopaedic Association. Dr. Manning is also a reviewer for the Journal of Bone and Joint Surgery. This past year, Dr. Manning completed scientific investigation of the Early Walk Program for minimally invasive knee replacement. This study resulted in presentations at AAOS and MAOA. Results of this program included shortened hospital stays, decreased pain scores, decreased narcotic consumption, increased satisfaction, fewer over-medication-related side effects and faster time to early recovery/rehab milestones after minimally invasive knee replacement. Dr. Manning is Director of the third year medical students orthopaedic surgery rotation and Director of the fourth year medical student surgery sub-internship. He also manages the resident recruitment process for the Orthopaedic Surgery Residency Program.

JOHN MARTELL, MD  Dr. Martell continues as Director of the Orthopaedic Biomedical Imaging Institute at Weiss Memorial Hospital. The Institute recently completed a multicenter study to evaluate the mid-term wear performance of Longevity Polyethylene. This study was supported by the William Harris Foundation. Dr. Martell continues his collaboration with the A.C.H.O.R. (Academic Network for Conservational Hip Outcomes Research) to develop software that standardizes the pre- and post-operative interpretation of clinical AP pelvic radiographs. Dr. Martell is also working with scientists at Argonne National Laboratory as a principal investigator to develop tactile feedback for the daVinci and other surgical robots. Dr. Martell’s newest focus has been on the development of software that measures the wear performance of polyethylene in total knee arthroplasty. He also continues his work as a researcher, teacher and mentor in the Section of Orthopaedic Surgery. Dr. Martell was nominated at the AOA for Distinguished Contributions to Orthopaedics Award, and although he was not selected, it was an honor to be considered for this prestigious award. Dr. Martell is an abstract reviewer for the Orthopaedic Research Society, Section of Arthroplasty and the Journal of Wear. He is principal investigator for the Harris Foundation’s Mid-term Longevity Study. A Multicenter Study for Wear Analysis of Longevity in Total Hip Arthroplasty. Dr. Martell also continues the monthly Morbidity and Mortality (M&M) conference at the University of Chicago for Orthopaedic Surgery.

DANIEL MASS, MD  Dr. Mass is currently completing editing a book on tendon repairs. Despite the severe winter weather, Drs. Benson, Birne, Henry and Phillips joined Dr. Mass in interviewing 42 Fellowship candidates out of 42 applicants. Two of their top four choices matched through NRMP for the 2012-2013 academic years. From November 27th through December 1st, Dr. Mass and his fellow, Dr. Turki, were in Lima, Peru through the auspices of Health Volunteers Overseas. Dr. Mass chaired “Doctors Demystify Shoulders” for OTs and PTs with the attendance of 42 therapists, a very successful course. Dr. Mass also conducted the freshman anatomy lecture and anatomy dissection lab for the winter quarter. Dr. Mass has also begun a new multiple site study on total wrist arthroplasties.

TERRANCE PEABODY, MD  Dr. Peabody continued his role as the Chief of the Section of Orthopaedic Surgery and Rehabilitation Medicine. Dr. Peabody was named the first President-Elect of the American Orthopaedic Association at the annual meeting in June 2011. He presented numerous topics at both the American Academy of Orthopaedic Surgeons annual meeting and the American Orthopaedic Association annual meeting. He was a Visiting Professor at the University of California, Irvine, Resident Research and Graduation, invited professor in June 2010, Visiting Professor at the University of Maryland, Update on Osteosarcoma in October 2010, the Seymour Orlov Visiting Professor in Oncology at Loyola University in February 2011, and the Visiting Professor at Yale University, Department of Orthopaedic Surgery Grand Rounds in May 2011.

BRUCE REIDER, MD  Dr. Reider continues to serve as the Editor-in-Chief of the American Journal of Sports Medicine. Dr. Reider serves on the Medical Publishing Board of Trustees and the Board of Directors for the American Orthopaedic Society for Sports Medicine. Dr. Reider is also the leader of the University of Chicago Orthopaedic Journal Club. Dr. Reider presented “Bench to Bedside: Is Laboratory Research Relevant to Clinical Sports Medicine?” course and the European Federation of National Sports Trauma Societies (EFOST), Brussels, Belgium, in November 2010. He also presented “How to Review a Scientific Paper” at the American Orthopaedic Society for Sports Medicine Annual Meeting in Providence, RI, in July 2010.

MICHAEL SIMON, MD  Dr. Simon serves as the Associate Dean of Graduate Medical Education and Designated Institutional Officer for the University of Chicago Medical Center. Dr. Simon provides historical perspective and mentors both faculty and residents in the Section of Orthopaedic Surgery and Rehabilitation Medicine. Dr. Simon is treasurer of OMeGA, a non-profit LLC for distributing industry-supported educational grants.

CHRISTOPHER SULLIVAN, MD  Dr. Sullivan continues his busy pediatric practice at the University of Chicago and many off-site clinics. He is a reviewer for Clinical Orthopaedics and Related Research. Dr. Sullivan was the recipient of the Family Defense Center’s 2010 Family Defender Award.

BRIAN TOOLAN, MD  Dr. Toolan became an ABOS Examiner for the Part II (oral boards) and Maintenance of Certification in July 2010. Dr. Toolan continues in his role as Program Director for the Orthopaedic Surgery Residency Program which had a successful internal program review in September 2010. Dr. Toolan presented an Instructional Course Lecture at the 78th Annual meeting of the American Academy of Orthopaedic Surgeons in February 2011.
Honors + Awards

JOVITO ANGELES, MD

ROBERT BIELSKI, MD

RODERICK BIRNIE, MD
Dr. Birnie was named President, Chicago Society for Surgery of the Hand.

HENRY FINN, MD
Dr. Finn received the Wilkes University Health Sciences Distinguished Service Award, 2010. The winners of the Wilkes Health Sciences Distinguished Service Award represent excellence in their fields and a passion for the healing professions. The award, which is presented every five years, recognizes an individual who is a leader in his/her field through ground-breaking research, innovation in treatment and outstanding service in his/her specialty. Aetna Institute of Quality Orthopedic Care for TJR, 10/12/10. United Health Care Premium Specialty Total Joint Center (received 3 stars – the highest quality rating) for Total Joints, 11/30/10. The Blue Distinction Program Award for Knee/ Hip Replacement, 2/18/11. Chicago Magazine’s Top Docs for Jocks (Orthopedics), April 2011. Editorial Board, Journal of Arthroplasty

PURMENDU GUPTA, MD

REX C. HAYDON, MD, PhD

TONG-CHUAN HE, MD, PhD
Dr. T-C He was named Adjunct Professor, School of Bioengineering, at Chongqing University, China. Reviewer, American Journal of Sports Medicine. Reviewer, American Journal of Human Genetics. Reviewer, Cancer Research. Reviewer, Clinical Cancer Research. Reviewer, Critical Reviews in Oncology/Hematology. Reviewer, EMBO.

Reviewer, Gastroenterology
Reviewer, Genomics
Reviewer, Genes & Development
Reviewer, Journal of Clinical Investigation
Reviewer, Journal of Orthopaedic Research
Reviewer, Laboratory Investigation
Reviewer, Molecular and Cellular Biology
Reviewer, Nature Biotechnology
Reviewer, Nucleic Acids Research
Reviewer, Oncogene
Reviewer, PLoS Series Journals
Reviewer, Proceedings National Academy of Science, USA
Reviewer, Science
Reviewer, Stem Cells
Reviewer, Stem Cells and Development
Reviewer, Special Emphasis Panel/NIH ZRG1 ONC-K (03) M, June 2010
Reviewer, Biomedical Research Council of Agency for Science, Technology and Research of Singapore (A*STAR), July 2010
Reviewer, the Wellcome Trust Senior Fellowships, UK, February 2011
Charter member, the Drug Discovery and Molecular Pharmacology (DMP) Study Section, NIH/NCI, Bethesda, MD
Editorial Board, Recent Patent Reviews on Anti-Cancer Drug Discovery
Editorial Board, Laboratory Investigation
Editorial Board, The Open Cancer Journal
Editorial Board, The Open Tissue Engineering & Regenerative Medicine Journal
Guest Editor, Current Gene Therapy
Editorial Board, World Journal of Stem Cells
Editorial Board, World Journal of Biological Chemistry
Editorial Board, World Journal of Orthopaedics
Editorial Board, American Journal of Stem Cells
Rehabilitation Medicine physicians work with other rehab professionals to restore or maximize each patient’s functional skills, self-sufficiency and mobility. That is why Physical Medicine and Rehabilitation (PM&R) is often thought of as the “quality of life” specialty, adding both life to years and years to life. Our physiatrists lead interdisciplinary teams that include nurses, physical therapists, occupational therapists, speech-language pathologists, case managers and others. These teams develop individualized treatment plans to address each patient’s rehab needs.

Treatment plans also focus on the patient’s longer term functional goals once they’re home in the community. These doctors provide patient care on an inpatient and outpatient basis. They also participate in various teaching activities for Schwab’s fully accredited residency training program in PM&R with the University of Chicago. Michelle Gittler, MD, is the resident program director at Schwab Rehabilitation Hospital and Clinical Associate Professor at the University of Chicago. She also teaches annually at the Primary Care Orthopaedics Course.

This past year, Dr. Lawler was awarded the University of Chicago Medical Center Social Work Humanitarian Award. This award is presented to a non-social worker who best reflects the social work profession’s values at UCMC. Some of the quotes received from the social workers who work with Dr. Lawler:

"DR. LAWLER TRIES TO REALLY IDENTIFY WHERE THE PATIENT IS AT...NOT ONLY MEDICALLY BUT EMOTIONALLY."

"DR. LAWLER ROUTINELY SHOWS SENSITIVITY NEGOTIATING PATIENT AND FAMILY DESIRES FOR REHABILITATION AGAINST THE HARSH REALITY OF THEIR CHRONIC, AND AT TIMES, TERMINAL ILLNESS."

"DR. LAWLER COMMUNICATES WELL WITH THE ENTIRE MEDICAL TEAM AS WELL AS THE SOCIAL WORKERS, PHYSICAL THERAPISTS AND OCCUPATIONAL THERAPISTS. SHE NEVER HESitates TO DIRECTLY ASK THE PRIMARY MEDICAL TEAM OR CONSULTING TEAMS FOR THEIR INPUT IN MAKING HER REHAB DECISION AND VALUES EVERYONE’S ROLE."

Kudos to Dr. Mary Lawler: Recipient of the University of Chicago Social Work Humanitarian Award!

Faculty

Rehabilitation Medicine
Residents

**PGY-1**

**JIMMY JIANG, MD**
Undergraduate/Graduate
Georgia Tech/University of Alabama School of Medicine

**MIN LU, MD**
Undergraduate/Graduate
University of Chicago/University of Chicago Pritzker School of Medicine

**GAUTAM MALHOTRA, MD**
Undergraduate/Graduate
UCLA/University of Chicago Pritzker School of Medicine

**ZACHARY SIKSO, MD**
Undergraduate/Graduate
University of Notre Dame/St. Louis University School of Medicine

**ANEET TOOR, MD**
Undergraduate/Graduate
UCLA/Ohio State University College of Medicine

**PGY-2**

**ERWIN BENNETT, MD**
Undergraduate/Graduate
Santa Clara University/University of Chicago Pritzker School of Medicine

**KEVIN HARDT, MD**
Undergraduate/Graduate
University of Notre Dame/Indiana University School of Medicine

**TYLER KRUMMENACHER, MD**
Undergraduate/Graduate
University of Notre Dame/St. Louis University School of Medicine

**DEEPAK REDDY, MD**
Undergraduate/Graduate
University of Michigan/University of Chicago Pritzker School of Medicine

**CHRISTIAN SKJONG, MD**
Undergraduate/Graduate
Carleton College/University of Chicago Pritzker School of Medicine

**TIMOTHY VANDERBILT, MD**
Undergraduate/Graduate
West Point/University of Chicago Pritzker School of Medicine

**PGY-3**

**KASHIF ALI, MD**
Undergraduate/Graduate
University of Michigan/Case Western Reserve University School of Medicine

**JAMES CAMERON, MD**
Undergraduate/Graduate
Furman University/Emory University School of Medicine

**MICHAEL CHIOFFE, MD**
Undergraduate/Graduate
University of Florida/University of Chicago Pritzker School of Medicine

**PGY-4**

**REGINALD ALEXANDER, MD**
Undergraduate/Graduate
Howard University/Howard University College of Medicine

**MARK BERGIN, MD**
Undergraduate/Graduate
University of Michigan/Wayne State University Medical School

**KYLE HAZELWOOD, MD**
Undergraduate/Graduate
Gonzaga University/Loyola University Stritch School of Medicine

**THOMAS O’HAGAN, MD**
Undergraduate/Graduate
University of Notre Dame/New York Medical College

**NOAH SHAFTEL, MD**
Undergraduate/Graduate
Miami University, Oxford, OH/Ohio State University College of Medicine

**PGY-5**

**MICHAEL ANGELINE, MD**
Undergraduate/Graduate
Boston College/Georgetown University School of Medicine

**WAGAS HUSSAIN, MD**
Undergraduate/Graduate
Augustana College/Loyola University Stritch School of Medicine

**ANDRE SPIGUEL, MD**
Undergraduate/Graduate
University of Michigan/University of Chicago Pritzker School of Medicine

**ROBERT STEFFNER, MD**
Undergraduate/Graduate
St. John’s University/Wayne State University

**TESSA BALACH, MD**
(Musculoskeletal Oncology)
Assistant Professor, University of Connecticut, Farmington, CT

**SURESH PATIL, MD**
(Adult Reconstruction)
Fellowship in Nebraska

**HUSSEIN TURKI, MD**
(Hand and Upper Extremity)
Private practice at Alabama Orthopaedic Specialists, Montgomery, AL

**ALEXANDER MEININGER, MD**
(Sports Medicine)
Private practice at Moab Regional Hospital, Moab, Utah

**Fellows—2011 Graduates**

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(Sports Medicine)
Private practice at Moab Regional Hospital, Moab, Utah
During the M3 year, we provide a core course for three hours, which includes instruction in casting and splinting, and a series of interactive lectures on orthopaedic topics. During their Surgery clerkship, third year medical students are given the option of selecting Orthopaedic Surgery as their subspecialty rotation for 2.5 weeks. During this 2.5 week rotation, the junior medical students are introduced to the field of Orthopaedics and given the opportunity to experience first-hand the rewarding yet challenging work we do.

During the M4 year, we offer a four week elective inpatient rotation. Students are exposed to the various orthopaedic subspecialties during this rotation. In addition to our own students from Pritzker, this rotation is very popular with visiting students from other institutions as well. We also offer an outpatient elective, which is aimed towards students entering into primary care fields. Year after year, we continue to see many of our own students choose Orthopaedics as a career. This year there are seven students from the Class of 2012 committed to Orthopaedics.

Our residency program continued to flourish over the past year and has been greatly strengthened by our academic affiliation with NorthShore University HealthSystem. Through our affiliation with NorthShore, our residents rotate at Evanston Hospital, a designated Level I trauma center and Glenbrook Hospital, a community hospital in Glenview, IL. All members of the NSUHS faculty are fellowship trained subspecialty surgeons in well-established community practices. The individual practices of the faculty collectively provide an extensive, subspecialty-driven ambulatory experience in the evaluation and management of outpatient orthopaedic conditions. We have six residents training at NSUHS at a time on the sports medicine, foot and ankle, trauma, hand and spine services.

The majority of the resident educational program in orthopaedic surgery continues to occur at the University of Chicago Medical Center. The clinical education is centered around inpatient units, on-site and off-site outpatient clinics, and the operating room. The management of patients is divided into seven clinical services that include joint reconstruction, spine, oncology, pediatrics, foot and ankle, hand and upper extremity, and sports medicine. Our curriculum is organized through these subspecialties and teams of residents are assigned to each service.

The didactic portion of the residents’ education occurs mainly through the morning clinical conferences. Our 6:15 am conference is a monthly rotating conference on pediatric orthopaedics, trauma, basic science, morbidity and mortality, quality assurance, sports medicine, adult reconstruction, spine, hand and upper extremity, and surgical indications for musculoskeletal diseases. All of our conferences are attended and led by attendings. Following the 6:15 am conferences, every weekday morning from 7:00 to 7:30 am, the junior resident on-call presents the emergency room cases from the evening before. This serves as quality control and educational experience for residents. After the emergency room review, all faculty are required to present their operative cases for the day and explain their operative indications. Following the faculty presentation, residents show radiographs of patients who were operated on the day before, so that all individuals can see some of the technical results from the previous day’s surgeries. In addition to our daily morning conferences, we also have a weekly Grand Rounds on Wednesdays and a monthly journal club. We are fortunate to have a large number of outside guest speakers present at our Grand Rounds. This past year, Drs. Terry Light, William Hopkinson, Erika Mitchell and Randy Bindra from Loyola; Drs. Michael Terry, Michael Shafer and David Stulberg from Northwestern; and Drs. Frank Phillips, Shane Nho and Greg Nicholson from Rush all gave presentations at our Grand Rounds.

Our four fellowship programs, Hand & Upper Extremity, under the direction of Dr. Daniel Mass; Sports Medicine, under the direction of Dr. Sherwin Ho; Musculoskeletal Oncology, under the direction of Dr. Rex Hayden; and Adult Reconstruction, based at Weiss Memorial Hospital, under the direction of Dr. Henry Finn, continue to train some of the nation’s brightest emerging orthopaedic subspecialists. Staying at the forefront of Orthopaedic medical education is a goal the Section of Orthopaedic Surgery and Rehabilitation Medicine strives toward at every level of education.
### Weekly Conference Schedule

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<td>MONDAY</td>
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<td>OITE Review/Oral Evaluations</td>
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<td>E-302</td>
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<td>TUESDAY</td>
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<td>AM Conference</td>
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<td>WEDNESDAY</td>
<td>E-302</td>
<td>Basic Science</td>
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<td>Grand Rounds</td>
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<td>AM Conference</td>
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<td>FRIDAY</td>
<td>E-302</td>
<td>Clinical Conference</td>
<td>See below</td>
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<td>E-302</td>
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**DAILY AM CONFERENCE:**
- Pre-op & Post-op Discussion
- X-ray Review from Previous Day
- E.R. X-ray Review

**MONTHLY CONFERENCE:**
- **JOURNAL CLUB**
  - Last Wednesday of each month
  - 7:00 a.m. — E-302
- **ETHICS**
  - One Wednesday quarterly
  - 7:00 a.m.

**WEDNESDAY BASIC SCIENCE CONFERENCE:**
- JULY — SEPT.: Anatomy — Haydon
- SEPT. — DEC.: Pathology — Simon/Haydon/Luu
- JAN. — JUNE: Basic Science Curriculum

**THURSDAY INDICATIONS CONFERENCE:** (on a rotating basis)
- 1st week: Trauma
- 2nd week: Adult Reconstruction
- 3rd week: Sports
- 4th week: Hand
- 5th week: Pediatrics
- 6th week: Foot and Ankle
- 7th week: Spine

**CLINICAL CONFERENCES:**
**TUESDAY**
- 1st week: Trauma — Gupta/Toolan/Mass/Birnie, Spine — Gupta
- 2nd week: Morbidity & Mortality — Martell
- 3rd week: Adult Reconstruction — Martell/Manning/Luu
- 4th week: Pediatrics — Sullivan/Bieliski

**FRIDAY**
- 1st week: Hand — Mass/Birnie
- 2nd week: Sports — Reider/Ho/Leland
- 3rd week: Adult Reconstruction — Manning/Martell/Luu
- 4th week: Foot and Ankle — Toolan, Spine — Gupta

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**Gerald S. Laros, MD, Library**

Gerald S. Laros, MD, died suddenly on September 20, 1992 in Durham, North Carolina at the age of 62. His premature death was a tremendous loss to the field of orthopaedic surgery and deeply saddened those of us who had the privilege of working with him and knowing him as a friend.

Since Dr. Laros made such valuable contributions to the Section of Orthopaedic Surgery and Rehabilitation Medicine at the University of Chicago during his years as Professor and Chief of the Section, we established a resident library as a permanent memorial to his life and work.

All of us who were acquainted with Dr. Laros knew how much he loved teaching and how concerned he was for his students, residents and faculty. We felt that the best tribute to him would be one that commemorated his commitment to education. By establishing the Laros Library, we have continued his commitment to education and to advancing the educational mission of the Section of Orthopaedic Surgery and Rehabilitation Medicine.

This past year we were able to remodel the library. It has a brand new look; we have added additional work stations, lockers for all residents and new furniture. We continue to keep the memory of Dr. Laros alive by maintaining this library for the orthopaedic residents at the University of Chicago.

— MICHAEL A. SIMON, MD
The orthopaedic residency program at NorthShore University HealthSystem is a valuable and dynamic part of the University of Chicago residency program. Six residents rotate continually through the NorthShore campus with specialty rotations in spine, hand, foot and ankle, trauma and sports surgery. Live daily interactive video provides linkage and continuity to the University of Chicago campus. Daily conferences on the NorthShore campus complement the University of Chicago programs including hand, trauma, events, arthroscopic correlation, journal club and spine conferences. Residents have the opportunity to interact with more than 20 clinical faculty and gain clinical experiences through the NorthShore Orthopaedic clinic, NorthShore OR’s, Evanston Hospital (level 1 trauma) ER, Ravine Way surgicenter and clinical offices of the faculty. Residents have the opportunity to participate in subspecialty specific motor skills education programs in the NorthShore Orthopaedic Psychomotor Skills & Virtual Reality Laboratory featuring state-of-the-art skills education in trauma and arthroscopic surgery.

2011 Wavering Lecture

The annual fall Wavering Lecture Series is sponsored by the NorthShore University HealthSystem Department of Orthopaedic Surgery to complement the annual spring Laros Lecture at the University of Chicago. The lectureship was established in 1984 and is supported by a grant from Mr. and Mrs. Elmer Wavering. Since its inception the lecture has featured well known speakers representing all subspecialties of orthopaedic surgery.

This year’s Wavering Lecture was held in the recently opened NorthShore Center for Simulation and Innovation (NCSI). J. W. Thomas Byrd, MD, a well known Sports Medicine physician from Nashville, TN was the guest speaker. Dr. Byrd is the team physician for the Tennessee Titans football team, served as physician for the U.S. Olympic team and is a consulting orthopaedic physician for numerous professional sports franchises. Dr. Byrd is a pioneer in hip arthroscopy and designed instrumentation that is commonly used throughout the world.

Dr. Byrd's featured lecture was “The Athlete’s Hip: Assessment and Management.” His lecture included the etiology, history, physical exam and imaging findings of the athletic hip and he discussed non-operative and operative treatments. Dr. Bryd presented an overview of his clinical experience by reviewing his peer reviewed publications, outlining specific case examples to illustrate various conditions and viewing the arthroscopic video findings. Jason Koh, MD, and Brad Dunlap, MD, presented cases which were discussed by Dr. Byrd as well as the group at large.

Following the lecture, Dr. Byrd performed a hip arthroscopy procedure on a cadaveric specimen in the NCSI Surgical Skills Lab. The surgical skills session was broadcast, with audio and video, to the NCSI classroom for over 30 attendees including surgeons and residents from NorthShore, U of C, Loyola University and Schwab Rehab Center. During the surgical skills session, those in attendance learned technical pearls for hip arthroscopy and had their questions answered by Dr. Byrd.
Our mission is to inspire colleagues to create new knowledge, to communicate knowledge through medical education and to provide superior and compassionate health care in a collegial atmosphere. Basic, clinical and translational research in orthopaedic science is an integrated part of our graduate medical education. Thus, in addition to clinical and educational commitments, our faculty is actively involved in a broad range of research on bone and musculoskeletal diseases, which have been highlighted in the following areas.

Research Activities

THE ORTHOPAEDIC BIOMEDICAL IMAGING INSTITUTE

As the Director of The Orthopaedic Biomedical Imaging Institute at Weiss Memorial Hospital in affiliation with the University of Chicago, Dr. John Martell continues to develop collaborations with implant manufacturers and individual investigators. Dr. Martell’s research has been funded by grants from The Harris Foundation, NIH/NIAMS, Smith & Nephew, Stryker, Biomet and Zimmer. The Orthopaedic Biomedical Imaging Institute is known nationally and internationally as a resource for the design and implementation of polyethylene wear studies and has been involved in the analysis of cross-linked polyethylene. Dr. Martell accommodates requests from academic joint-replacement programs to observe the techniques that are used in processing and analyzing films. The Orthopaedic Biomedical Imaging Institute has become a world-class resource for the analysis of polyethylene wear in total hip arthroplasty. The Institute has furthered its commitment to orthopaedic research by sponsoring the Geraldine Mary Maley Research Award, an annual research award for projects developed by faculty/residents in the Section of Orthopaedic Surgery at the University of Chicago or Weiss Memorial Hospital.

Dr. Martell has recently developed several important and innovative biomedical imaging tools. First, mechanical analysis software allows investigators to estimate the joint reaction force and stress in normal and prosthetic hips. Using the joint stress as a predictor variable in combination with patient activity indicators (speed of walking, UCLA score, or pedometer data) he has developed a multiple logistic regression model that can identify patients with total hips that are at risk for high wear and osteolysis in the long term. This model is now 87% accurate and has no false negatives in a series of 300 hips with minimum 8 year follow up.

Dr. Martell has partnered with Dr. Christian Heisel at Heidelberg University in Germany to investigate the biomechanical factors predisposing women to hip arthritis. Preliminary results show a significantly higher contact stress in the native hips of women patients compared to men. Factors that play a role in this finding are: a wider female pelvis, causing the body weight moment arm to be larger, and smaller femoral offset in women and smaller femoral heads, which increase contact stress. Dr. Martell is also working with Dr. William Walters from Australia to investigate the biomechanics of ceramic total hip arthroplasty to identify factors leading to squeaking in ceramic total hip arthroplasty.

As an extension of the mechanical analysis software, Dr. Martell developed preoperative templating software which allows the surgeon to template pre-operatively using knowledge of the impact choices for keyboard, stress and wear performance of the implanted prosthesis hip joint. This identifies reconstructive options that put the patient at risk for high wear, and assists the surgeon in choosing prosthetic position and designs to minimize this significant complication. Another modification of the mechanical analysis software allows the estimation of shear forces in the capital femoral epiphysis that predispose to slipped capital femoral epiphysis in children. These shear forces, in conjunction with the skeletal age of the pelvis, have a predictive value of 90 percent for the risk of SCFE.

Dr. Martell has partnered with Argonne National Laboratories, and has received $20,000 through the BIASE initiative to fund a pilot project to develop a visual-tactile feedback system for use in minimally invasive robotic surgery. Preliminary testing of this video processing image analysis system has shown the capability to detect real time suture strain rates that are 100 times lower than the strain to failure. Work now continues on perfecting the video processing, including measuring strains in sutures from archived clinical videos.

POLYETHYLENE WEAR PARTICLE-INDUCED OSTEOLYSIS

Drs. David Manning and Hue H. Luu are interested in the bioimaging analysis of polyethylene wear in total hip arthroplasty and the development of more effective therapeutic and/or preventive measures for the clinical management of osteolysis. Osteolysis and resultant aseptic loosening is the most common cause of long-term failure in total joint replacements and is estimated to occur in over 25% of implant recipients. Current strategies to combat osteolysis include modifications of the bearing surface to decrease particle generation and biologic and/or pharmaceutical treatments once osteolysis has occurred. Alternate bearings, as of yet have not proven to be effective and pharmacological interventions such as bisphosphonates, Fosamax, and anti-inflammatory have, likewise, been unsuccessful thus far. Dr. Manning has recently completed...
an in vivo wear comparison study of highly crosslinked and traditional polyethylene in total hip arthroplasty. In a combined effort with Argenne National Laboratory, Dr. Manning is investigating non-friction carbon coating (NFC) applications in total joint replacement. Preliminary investigation of tribologic and mechanical properties as well as bio-compatibility has been completed. The team has recently applied for NIH support for the development of this novel material. Furthermore, Drs. Manning and Luu are investigating the potential use of several osteogenic BMPs as a biologic treatment of osteolysis-related bone loss. Successful non-operative treatment of osteolysis would improve implant survival, prevent many revision arthroplasties, and simplify revision surgery techniques.

TENDON REPAIR

Drs. Daniel Mass and Brian Toolan, in collaboration with Drs. T.-C. He, Rex C. Haydon and Hue H. Luu, are investigating possible gene therapy approaches to enhance tendon and ligament healing using recombinant adenoval vectors expressing BMPs and/or other biological factors. With funding from the Orthopaedic Research and Education Foundation (OREF), Drs. Mass, Toolan and colleagues have demonstrated that BMP-13 can significantly improve the biomechanical properties of lacerated flexor tendons in a rabbit model. Drs. Mass and Toolan and colleagues have also demonstrated that BMP-14 can significantly improve the biomechanical properties of lacerated flexor tendons in a rabbit model. Based on time-course studies of gene expression after tendon injury, Dr. Mass has identified several factors that may work alongside BMP-13 and BMP-14 at different stages of tendon healing. Dr. Mass is currently collaborating with Dr. Yu of the Department of Chemistry to develop bio-degradable nano-capsules that can be used for time-released delivery vehicles for bio-active proteins to sites of tendon injury. This delivery system will be used to test the effect of TGFβ and BMP-14 on tendon healing in a rat model of Achilles tendon repair (Hand Surg Am. 30: 136-144).

FOOT AND ANKLE RESEARCH

Dr. Brian Toolan has completed several clinical projects related to foot and ankle disorders. In the past, he studied the effects of acquired flatfoot deformity on tibialotal contact pressures in a cadaveric model, and performed a follow-up study on the effects of UCBL orthotics and surgical techniques on joint contact characteristics in the same model. Both of these studies were published in Foot & Ankle International. He recently published a retrospective study in Foot & Ankle International comparing lateral column lengthening to a medial column lengthening in the treatment of adult acquired flatfoot. Dr. Toolan is currently conducting a similar comparison in a prospective clinical study that is ongoing. Lastly, he is retrospectively evaluating the results of a new procedure for salvaging malunited ankle fractures with chronic syndesmotic disruption using a distal fibular arthrodesis and soft tissue reconstructions.

In addition to his interests on flatfoot deformity, Dr. Toolan is interested in developing a better understanding of ruptured Achilles tendon healing process and potentially developing new means in treating patients with this injury. Achilles tendon ruptures are common injuries and both surgical and non-surgical treatments have frequent complications such as wound dehiscence and re-rupture. Therefore, Dr. Toolan, in collaboration with Drs. He, Haydon and Luu, has used a rat model to investigate the effects of BMP-14 and other factors on Achilles tendon healing, finding a 70 percent increase in tensile strength at two weeks. This study was funded by a research grant to Dr. Toolan from American Orthopaedic Foot & Ankle Society, and was published in the Journal of Bone and Joint Surgery.

SPINE RESEARCH

Dr. Purnendu Gupta has been involved in numerous clinical and translational projects regarding spine-related pathologies. In the cervical spine, he has previously investigated static versus dynamic plating techniques for multilevel ACFD and has presented his results at the North American Spine Society Annual Meeting and American Academy of Orthopaedic Surgeons Annual Meeting. This project was published in Spine in 2007. He has also been reviewing clinical and radiographic results after laminoplasty for multi-level cervical spinal stenosis. In the lumbar spine, Dr. Gupta has been involved in collaborative investigations examining percutaneously inserted pedicle screw-rod system following anterior lumbar arthodesis as well as biomechanical modeling of functional impairment and the prediction of spine loading. He has ongoing long-term prospective clinical outcomes research in the surgical treatment of adult and pediatric scoliosis. He is also currently working on a surgical technique for the treatment of pediatric spondylodiscitis, and is reviewing his clinical results using rhBMPs for treatment of pars fractures (Spine J 5: 2505-2558).

ARTICULAR CARTILAGE REGENERATION AND ANTERIOR CRUCIATE LIGAMENT REPAIR

The Sports Medicine Services, consisting of Drs. Sherwin Ho, Martin Leland and Bruce Reider has been intensively investigating the biological processes in articular cartilage regeneration, anterior cruciate ligament repair, and rotator cuff tear repair. Articular cartilage has little intrinsic capacity to repair itself after injury, prompting many researchers to explore new methods to facilitate and augment cartilage regeneration. Currently, a variety of approaches have been developed, including chondroplasty, osteochondral transfer procedures (autologous and allograft procedures), microfracture and autologous cultured chondrocyte implant (ACCI). Each of these techniques is useful when utilized in appropriate conditions; however, a significant cohort of patients still fail to achieve good to excellent results even when surgical, pharmacologic and physical therapy are optimal by current standards. These clinical failures suggest that new biologic strategies, including gene therapy, may be a useful adjunct to current treatments to further improve clinical outcome.

Drs. Ho, Leland and Reider are investigating the possible use of Sox9 and/or other biofactors to facilitate articular cartilage regeneration. Previously, Drs. T.-C. He and Rex C. Haydon successfully transduced intervertebral disc cells with Sox9, a transcription factor necessary for chondrogenesis and Type II collagen synthesis. They observed that human degenerative intervertebral disc cells transplanted with Sox9 genes led to chondrocyte proliferation with increased production of Type II collagen (Spine 28: 755-763). Currently, Drs. Ho, Leland and Reider are investigating, whether exogenous expression of Sox9 in articular cartilage cells or in mesenchymal stem cells will augment articular cartilage repair in a rabbit model. Dr. Ho received the AOSSM Young Investigator Award to carry out the Sox9 gene therapy for articular cartilage repair. This research has included experiments comparing different man-made scaffolds that can be used to implant these genetically altered cartilage cells back into the host knee defects. In addition, Drs. Ho, Leland, and Haydon are investigating the potential use of BMP-13 and/or PRP (platelet-rich plasma) for rotator cuff tears using a rat model, as possible treatment options for patellar tendinosis, and a unique approach to rehabilitation following ACL reconstruction surgery.

The Sports Medicine Service has developed a surgical skills laboratory for medical students, residents and fellows to develop their arthroscopic and minimally-invasive surgical skills using a state-of-the-art virtual reality arthroscopy simulator (MIST) developed by the Spanish aerospace company, GMV based in Madrid, as well as using cadavers. Such virtual and simulated surgery represents important new educational tools for training medical students, residents and fellows. A study to quantitate the learning of these skills was presented at the Arthroscopy Association of North America’s Annual Meeting in San Francisco this year, as well as at the Mid-America Orthopaedic Society’s Annual Meeting in Marcus Island, Florida and has been submitted for publication.

Dr. Reider is also engaged in an ongoing clinical prospective cohort study of possible links between knee proprioception in collegiate soccer and basketball players. Dr. Reider’s previous research has shown that athletes with ACL tears have abnormal proprioception of the knee that returns to normal after ACL reconstruction. The current project prospectively measures proprioception in a large number of healthy athletes to see if those who go on to tear their ACLs have deficient proprioception prior to the injury. Dr. Reider has also completed a study of degenerative meniscal tears, which has been submitted for publication.

OSTEOSARCOMA IS A “DIFFERENTIATION DISEASE”

Under the direction of Drs. T.-C. He, Rex C. Haydon and Hue H. Luu, the Molecular Medicine Laboratory has focused on the molecular aspects of bone and soft tissue tumors through collaborations with Drs. Michael A. Simon, and Anthony Montag. They previously found that 8-catenin signaling is activated in approximately 70% of human osteosarcoma samples, suggesting that deregulation of 8-catenin may play a role in the development of human osteosarcoma. More recently, they have found that STI-571/Gleevec effectively inhibits 8-catenin signaling in human colon cancer cells, as well as in human osteosarcoma and chondrosarcoma cells. Their findings suggest that inhibition of this signaling pathway by STI-571 may be further explored as an important
MOLECULAR BIOLOGY OF BONE FORMATION

Identification of BMP-9 as the most osteogenic BMP in vitro and in vivo. Understanding the molecular mechanisms underlying bone formation is pivotal for understanding the pathogenesis of bone diseases, as well as for developing effective approaches to bone regeneration. Although several BMPs (mostly BMP-2 and BMP-7) have been shown to induce bone formation, it is unclear whether the ones currently used represent the most osteogenic BMPs. Through a comprehensive analysis of the 14 types of human BMPs, the He, Haydon and Lu laboratory demonstrated that BMP-2, BMP-6 and BMP-9 are the most potent osteogenic BMPs in osteoblastic progenitor cells in vitro, which was published in the *Journal of Bone and Joint Surgery* with over 300 citations so far. They have concluded several rounds of in vivo studies and found that BMP-2, BMP-6 and BMP-9 are the most potent osteogenic BMPs at inducing orthotopic bone formation in athymic mice (*Gene Therapy* 11:1332-1339; J Orthop Res 25:665-677; and *Front Bioi. 13: 2003-2021*).

Interestingly, they have also found that osteogenic BMPs can induce adipogenic differentiation of mesenchymal stem cells (Stem Cells and Development 18:545-559; and *Cell Sciences Reviews* 3:342-369). They have recently demonstrated that TGFβs/BMP type I receptors ALK1 and ALK2 are essential for BMP-9-induced osteogenic signaling in mesenchymal stem cells (*J Biol Chem. 285(38): 29588-98*). Molecular mechanisms of BMP-regulated osteogenesis in mesenchymal stem cells: To identity potentially important mediators of BMP-induced osteogenic signaling, Drs. He, Haydon and Lu determined the transcriptional differences between three osteogenic BMPs (i.e., BMP-2, 6 and 9) and two inhibitory/non-osteogenic BMPs (i.e., BMP-3 and 12). Through the microarray analysis of ~12,000 genes in pre-osteoblast progenitor cells, they found that expression level of 203 genes (105 up-regulated and 98 down-regulated) was altered ~2-fold upon osteogenic BMP stimulation. BMP-regulated expression of the selected target genes was confirmed by RT-PCR and CodeLink microarray analysis. Gene ontology analysis revealed that osteogenic BMPs, but not inhibitory/non-osteogenic BMPs, activate genes involved in the proliferation of pre-osteoblast progenitor cells towards osteoblastic differentiation, and simultaneously inhibit myoblast-specific gene expression. Their findings are consistent with the notion that osteogenesis and myogenesis are two divergent processes.

**Drs. He, Haydon and Lu** have recently investigated the potential synergistic effect of other factors on BMP-9-mediated osteogenic differentiation and bone formation. Such factors include retinoid receptors and IGFs (*PLoS ONE* 5:e1197; and *Journal of Bone and Mineral Research* 25:3447-59). They have also begun to examine the role of Wnt-signaling in osteosarcoma, and its impact on CTGF expression. Given the frequency of beta-catenin dysregulation in osteosarcoma and the diverse biological functions of CTGF in both normal cells and tumors, this may offer new insights into how osteosarcomas develop, and explain why osteosarcoma responds differently from stem cells to stimuli that promote differentiation. Secondly, it may lead to methods to circumvent these blocks to normal differentiation (*Histology and Histopathology* 25:795-806).

**Drs. Lu, Haydon and Lu** recently developed a novel orthotopic tumor model for osteosarcoma progression and pulmonary metastasis (*Clin Exp Metastasis* 22:319-329). This model highlights different stages of primary bone tumor progression and the eventual development of pulmonary metastasis. Drs. He, Haydon and Lu are currently using this model to investigate several genes for their role in controlling bone tumorigenesis and metastasis. Meanwhile, they have conducted gene profiling analysis of gene expression patterns between non-metastatic and highly metastatic osteosarcoma cells, and have identified several promising candidate genes associated with pulmonary metastasis of osteosarcoma. Further functional characterization of these target genes is currently ongoing (*Clinical & Experimental Metastasis* 26:599-640). They have recently reported that insulin-like growth factor binding protein 5 (IGFBP5) suppresses tumor growth and metastasis of human osteosarcoma (*Oncogene* 30(37):3907-17). Effects of natural products and herbal extracts on cancer cells and stem cell differentiation: As natural products and herbs represent a great deal of resources for drug discovery, we have collaborated with Dr. Chun-Su Yuan of the Tang Center for Herbal Medicine Research and investigated the effect of several herbal products, such as Herberine and gingkose extracts, on cancer growth and proliferation, as well as on stem cell differentiation. Dr. He was one of the PIs on a POI grant from the NIH to study the role of herbal products in cancer (*International Journal of Oncology* 32:975-983; Oncol Rep 22:943-952; *Biol Pharm Bull* 32:1552-1558; *Cancer Lett* 289:62-70; *Mol Pharmacol* 79(2):211-9).


Chen L, Jiayi Huang, Ke Yang, Mi Li, Ning Hu, Xing Liu, Mi Li, Xing Liu, Yuxi Su*, Eric R. Wagner*, Qing Luo, Qiong Shi, Bing-Qiang Zhang, Ling-Liang Deng, Russell R. Reid, Hue H. Luu, Rex C. Haydon, and Tong-Chuan He (2011) BMP-9 Induced Osteogenic Differentiation of Human Mesenchymal Stem Cells: A Focus on Osteogenic and Chondrogenic Differentiation. Stem Cells International 2011:325238

Gaurav Luther, Eric R. Wagner, Guohui Zhu, Quan Kang, Qing Luo, Joseph Lamplott, Yang Bi, Xiao-Jie Luo, Juming Luo, Chao-Ten Wei, Qiong Shi, Stephanie H. Kim, Juming Luo, Liang Chen, Jinyong Wang, Xing Liu, Mi Li, Ning Hu, Xing Liu, Mi Li, Ning Hu, Long Kong, Xinyu Liu, Yan-Hong Gao, Jian-Li Gao, Bing-Qiang Zhang, Ling-Liang Deng, Russell R. Reid, Hue H. Luu, Rex C. Haydon, and Tong-Chuan He (2011) BMP-9 Induced Osteogenic Differentiation of Mesenchymal Stem Cells: Molecular and Mechanistic Potential. Current Gene Therapy 2011 Apr 1.

DR. LELAND


DR. LUU

16th Annual Gerald S. Laros Memorial Visiting Professor

MARVIN TILE, C.M., M.D., B.SC., FRCSC

Born in Toronto to immigrant parents, Dr. Tile attended Harbord Collegiate and the University of Toronto Medical School, graduating with B.Sc. (Medicine) and M.D.(577) degrees. As a student at University of Toronto, he was very athletic and played for three years on the senior basketball team. The connection of sports and trauma, as well as “the ability to do good and see your results almost immediately,” drew him to orthopaedic surgery. He became a Fellow of the Royal College of Physicians & Surgeons of Canada in 1963, and spent 18 months working with his mentor, George Pennal, as a research and clinical Fellow. Subsequently as a Detweiler Traveling Fellow of the Royal College of Physicians and Surgeons of Canada, he visited the major orthopaedic centres in England and Europe, meeting Sir John Charnley, who pioneered total hip replacement, and Dr. Maurice Muller, who spearheaded new work in fracture care.

Appointed to Sunnybrook’s surgical staff in 1966, Dr. Tile became Chief of the Division of Orthopaedic Surgery in 1971. He was instrumental in the development of the internationally renowned Sunnybrook Trauma Unit, the first and still largest in Canada, which opened in 1976. From 1985 to 1996 he was Surgeon-in-Chief. He chaired the Sunnybrook Foundation from 1996-2002.

Dr. Marvin Tile is currently Professor (Emeritus) of Surgery at the University of Toronto, Consultant Orthopaedic Surgeon at Sunnybrook Health Sciences Centre. He has been very active in philanthropy, having chaired the Sunnybrook Foundation and its governing Council. He has also chaired the Holy Blossom Temple Foundation.

He has received many honors, including:
- The Marvin Tile Chair in Orthopaedic Surgery, Sunnybrook HSC and the University of Toronto
- Inaugural Rose Award for volunteerism at Sunnybrook HSC
- Member of the Order of Canada on July 2, 2009 (Highest Civilian Honour bestowed on a Canadian Citizen)

He is most proud of his 55 year marriage to Esther, and his immediate family now numbering eighteen.

Graduating residents

Michael Angeline, MD
Hospital for Special Surgery in New York; Sports Medicine and Shoulder Fellowship under the direction of Drs. David Altchek and Scott Rodeo

Waqas Hussain, MD
Cleveland Clinic, Sports Medicine Fellowship under the direction of Dr. Mark Schickendantz

Next year’s AAOS meeting is being held in San Francisco. The University of Chicago’s Alumni Reception will be held at The Grand Hyatt, San Francisco on Friday, February 10, 2012 from 6:30 to 8:30 p.m. I look forward to seeing you at the Annual Meeting in March.

Sincerely,

Michael A. Simon, MD
Associate Dean of Graduate Medical Education/DIO
Interim Chief, Section of Orthopaedic Surgery + Rehabilitation Medicine
EUGENE J. BARTUCCI, MD
1986 Graduate
Medical Director of Elmhurst Orthopaedics
Elmhurst, Illinois

Dr. Bartucci received his medical degree from the Pritzker School of Medicine at the University of Chicago. Following an internship with the University of Chicago Medical Center, he also completed his residency at the University of Chicago in orthopaedic surgery.

Dr. Bartucci has been on the staff of Elmhurst Memorial Hospital since 1986, where he specializes in total joint reconstruction for the knee, hip and shoulder as well as arthroscopic ligament reconstruction. He provides treatment for work- and sports-related injuries to patients of all ages.

WILLIAM PHILLIPS, MD
1983 Graduate
Professor of Orthopaedic Surgery at Baylor College of Medicine
Houston, Texas

Dr. Phillips received his medical degree from the Pritzker School of Medicine at the University of Chicago. He followed with an internship with the University of Chicago Medical Center, and then completed his residency here in orthopaedic surgery.

Dr. Phillips’ clinical interest is in pediatric orthopaedics and spinal disorders such as scoliosis, kyphosis, spondylolysis and spondylolisthesis. He also treats disorders of the cervical spine, and neuromuscular problems such as myelomeningocele and cerebral palsy.

GEORGE T. SHYBUT, MD
1981 Graduate
Wellington Orthopaedics & Sports Medicine
Cincinnati, Ohio

Dr. Shybut completed his medical education at the University of Chicago and remained there for his residency. Dr. Shybut entered the academic practice of Orthopaedic Surgery at Northwestern University.

Dr. Shybut moved to Cincinnati, Ohio in 1990 and entered private practice. He is currently a team physician to United States Figure Skating. He is the Chair of the By-Laws Committee of the American Academy of Orthopaedic Surgeons. He resides in Anderson Township with his wife Rebecca and has four children.

Pediatric Fractures and Dislocations, 18th Annual Primary Care Orthopaedics, Chicago, IL, June 28, 2011
Pediatric Bone and Joint Infections, 18th Annual Primary Care Orthopaedics, Chicago, IL, June 28, 2011
Pediatric Orthopaedic Trauma, Pediatric Trauma Nursing Class, University of Chicago, Chicago, IL, July 25, 2011

JOVITO ANGELES, MD
Congenital Shoulder Disorders,
Lecture, Doctors Demystify, University of Chicago Medical Center, April 9, 2011
Neuropathies about the Shoulder and Thoracic Outlet Syndrome, Lecture, Doctors Demystify, University of Chicago Medical Center, April 9, 2011
Advances in Nerve Gap Management, Lecture, Orthopaedic Grand Rounds, Section of Orthopaedic Surgery and Rehabilitation, Department of Surgery, University of Chicago Medical Center, Nov 10, 2010

ROBERT BIELSKI, MD
Pediatric Lower Extremity AAOS/ASSH General Orthopaedic Review Course, Chicago, IL, July 2010
The Pediatric Flexible Flatfoot 2011, Midwest Podiatry Conference, Chicago, IL, March 3, 2011

Pediatric Fractures and Dislocations, 18th Annual Primary Care Orthopaedics, Chicago, IL, June 2011
Pediatric Bone and Joint Infections, 18th Annual Primary Care Orthopaedics, Chicago, IL, June 2011
Pediatric Orthopaedic Trauma, Pediatric Trauma Nursing Class, University of Chicago, Chicago, IL, July 25, 2011

RODRECK BIRNIE, MD
17th Annual Primary Care Orthopaedics Course, June 2010, Adult Upper Extremity Fractures
Doctors Demystify The Shoulder for OTs and PTs, April 9th, 2011, Subacromial Impingement and Rotator Cuff Pathology

HENRY FINN, MD

PURNENDU GUPTA, MD
Treatment of Pediatric High Grade Spondylolisthesis: Department of Orthopaedic Surgery, Hokkaido University, Japan, September 16, 2010

REX C. HAYDON, MD, PhD
J Rice, K Fleck, T Balach, J Shen, R Haydon, TC He. Effect of IGF1 and BMP-3 on Physiological Injury in a Rat Tibia Model. Poster presented at the 2010 Annual
Faculty Feature:

BRUCE REIDER, MD

The interactive format of a journal club setting is a primary means of educating residents. Residents and faculty are responsible for leading the discussion and interpretation of the month’s assigned reading. Readings come from scientific publications and articles from peer-reviewed journals, such as the Journal of Bone and Joint Surgery and the American Journal of Sports Medicine. The expertise and time required to maintain an up-to-date journal club may present a challenge in some settings; however, at the University of Chicago we are very fortunate to have our journal club chaired by Bruce Reider, MD, Editor-in-Chief of the American Journal of Sports Medicine.

In 2007, Dr. Reider became a Professor Emeritus at the University of Chicago. He is about to begin his second decade as the Editor-in-Chief of the American Journal of Sports Medicine. Even with his busy schedule, he continues to serve as head team physician for the University of Chicago intercollegiate team.

The last decade has been a time of dramatic change for the world of medical publishing. Under Dr. Reider’s leadership, the American Journal of Sports Medicine has converted to a modern electronic internet-based file management system. American Journal of Sports Medicine always had an international outlook, but now electronic publication and manuscript submission has eliminated all geographic barriers, facilitating the participation of authors and reviewers from all around the world. Most importantly to our program, Dr. Reider continues to participate in the resident teaching conferences. This is an important part of our educational program: Learning to evaluate published research critically equips a young surgeon with the skills needed to adapt to the rapidly changing knowledge base in orthopaedic surgery. Our residents always do an outstanding job of analyzing and critiquing the orthopaedic literature. Dr. Reider adds some additional insights from the perspective he has obtained as a journal editor. Dr. Reider has developed his own style, which usually combines anecdotes from sports, literature, popular culture or even his own personal life with an academic discussion of topics in orthopaedic sports medicine or issues in medical publishing. As journal editor, he continues to look for new ways to communicate scientific information to an ever-changing group of readers.

“Dr. Reider is a very special member of our faculty. He provides our residents with an unparalleled educational experience as the leader of our monthly journal club. He is the Editor of the Journal with the highest impact factor in all of orthopaedic surgery.”

MICHAEL A. SIMON, MD