

Joint Ventures

DEPARTMENT OF ORTHOPAEDIC SURGERY, SPORTS MEDICINE & REHABILITATION



Boonshoft
School of Medicine
WRIGHT STATE UNIVERSITY

Department of Orthopaedic Surgery
Sports Medicine & Rehabilitation

Volume 9: 2011

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Message from the Chair



The past year has been one of great change in the orthopaedic community at Wright State and in Dayton in general. The residency now has

its full complement of residents with four per year as well as two research residents. This increase allows the residents to rotate on the major services both at a junior level and a senior level.

As our department has grown, the need for collaboration has grown as well. We see this in the clinical arena as hospitals align with each other as well as physicians. More and more orthopaedic surgeons in our area are now employed by hospitals. This certainly changes the dynamics of competition, but does allow the hospitals more leverage as they build service lines (joint replacement, spine, sports medicine) to appeal to the patient population areas. Though we are not employed by a hospital system, Wright State Orthopaedics has benefitted from the service line mentality and embraced it as our subspecialty-trained surgeons provide leadership in the service line development. This model allows our subspecialty-trained and certified sports medicine physicians—Dr. Ellis, Dr. Herbenick, Dr. Lawless, and Dr. Rubino—to serve as team physicians for both Wright State University and the University of Dayton. Drs. Lawless and Binski participate in the joint replacement service line at Miami Valley Hospital and Drs. Prayson and Binski provide leadership in the trauma service line. This service line mentality will be practiced in the new Wright State Physicians building.

Our research endeavors continue to expand. This year we hired Mary Blackmore, Ph.D., to head our tissue engineering program. This was made possible with collaboration between the Division of Plastic Surgery, Orthopaedic Surgery, and the Community Tissue Center. Dr. Blackmore has built a cell lab at the Community

Tissue Center under the direction of Shawn Hunter, Ph.D., and has started a stem cell lab in the plastic surgery clinical office at Miami Valley Hospital. This is a new and exciting area for us and truly represents the future of medicine. This will not only be an area to compete for funded research, but will also provide ample opportunities and resources for medical students, residents, and graduate students to pursue high quality research. Dr. Blackmore has shown tremendous energy in building this program and I believe she will be a great asset to our department.

Our partnership with the Wright State University Department of Bioengineering continues to grow as well. Tarun Goswami, Ph.D., continues to grow his program in biomechanics and orthopaedic bioengineering. Thomas Hangartner, Ph.D., took over as chairman of the department this year. His considerable background in bone density and osteoporosis has been a great asset to our orthopaedic research endeavors. With his interests in the biomechanical fields, we will continue to develop our collaborative projects.

Our collaboration continues to grow as we open our clinical building on the Wright State University campus in the summer of 2012. This building is the product of eight years of planning and has evolved into a clinical building owned by Wright State Physicians. Orthopaedics will occupy the first floor and will provide comprehensive services including primary care sports medicine and orthopaedic surgery, physical therapy, and athletic training, as well as x-ray and advanced MRI imaging. Through collaborations with the Wright State University Athletic Training Program, we will develop our mutual interests in clinical care and research. We will use techniques and research to provide the most advanced care to the athlete, the community at Wright State, and the surrounding area as a whole.

Overall the future is bright for Wright State Orthopaedic Surgery, Sports Medicine, and Rehabilitation. We have many challenges in 2012 and look forward to tackling them.

Orthopaedic Surgery Residency Update



Happy 2012 to all of you in the Wright State family! My hope is that your 2011 was as good as the one we enjoyed in the Wright State Residency

Program. Our program had another excellent class of graduating chief residents to send off to the world to take care of people. We graduated three residents this past June, two who are subspecializing in spine and one who took a position as a general orthopaedic surgeon. Both Kenny Edwards, M.D., and Brad Picha, M.D., ventured off to post-graduate fellowships in spine surgery. Kenny has accepted a fellowship position at Texas Back Institute and Brad a fellowship at OrthoIndy. Although we are always proud of our residents getting great fellowship positions such as these, it is equally satisfying to see graduates enter clinical practice after residency without one. Adam Hamilton, M.D., has taken a private practice position as a general orthopaedist in Minnesota and has hit the ground running in his practice. It gives us great satisfaction to hear back from Adam about how well prepared he feels in clinical practice without having done a fellowship.

Our expansion of the residency to four per year is complete and we are maintaining the two research residents. Our new challenge this year has been the implementation of the new ACGME work hour restrictions, which have had the biggest effects on the intern year. First-year residents no longer work any more than a 16-hour

shift. This change has been adopted and actually seems to be working well with our orthopaedic interns. They still work 70-80 hours per week and have a higher level of supervision. The upper level residents are able to work 24-hour shifts, but have a shortened period for transition of duty. Our department has implemented these changes and the challenges they bring.

We were very fortunate in the NRMP match this past year and are proud to have matched with Matt Cavo, M.D., Joe Cox, M.D., Jake Deister, M.D., and Jed May, M.D. We welcome our new residents to the Wright State University Orthopaedic Surgery family. The residency continues to grow and flourish with quality graduates and an impressive complement of new residents.

As residency program rules continue to change, the department has been busy making adjustments to the educational process. We have responded to resident hour restrictions by enhancing our bio-skills and simulation surgery programs. We are dedicated to staying ahead of the educational curve by creating unique learning environments that improve the procedural skills and knowledge of our residents. We have partnered with the Wright State University College of Engineering to explore educational and research opportunities for the residency using simulation and learning models. This past year the residency program has produced 22 published works, presented 58 research projects at meetings, and are involved with numerous research projects.

Peggy Baldwin continues to serve as the educational coordinator for both the orthopaedic surgery residency and orthopaedic trauma fellowship. Her job continues to grow and she has handled the added responsibilities and requirements with grace. She has served on numerous committees and has been a leader in the Association of Residency Coordinators in Orthopaedic Surgery (ARCOS). She brings national recognition to our program and always comes back from her meetings with new ideas.

While we feel fortunate to have so much to be thankful for as a program, I believe there are even greater things to come in the future. As health care policy changes, resident demands increase, and work hours become more restricted, we are constantly looking for ways to optimize the educational process. We thank our dedicated alumni and clinical faculty for their support and hope that your contributions to the program continue to improve resident education and make this a special place to train.

—Michael A. Herbenick, M.D.

Orthopaedic Interest Group

The Wright State University Boonshoft School of Medicine's Orthopaedic Interest Group continues to meet four times during the academic year with the purpose of sharing valuable information with those medical students interested in orthopaedics as a career choice. It provides the students access to orthopaedic faculty and residents on an informal basis and covers a wide variety of topics, including information on how to be a successful orthopaedic residency candidate, casting and splinting, and orthopaedic subspecialties. This year's group was led by fourth-year medical student, Andrew Burleson.

Resident Fund Contributions

Dr. Marcos E. and Mrs. Martha D. Amongero
 Dr. Christopher Anderson and Ms. Johanna Moore
 Dr. Gerard A. and Mrs. Marilyn J. Dehner
 John W. Hamilton, D.D.S., PC
 Dr. Brian K. and Mrs. Sandra C. Hutchinson
 Innovative Medical Group LLC/
 Tom Conroy
 Janssen Pharmaceuticals
 Ohio State University
 Ortho-McNeil-Janssen Pharma, Inc.
 Joan L. Picha
 Teresa J. Pursles
 Benjamin C. Roelle
 Smith & Nephew
 Synthes

Orthopaedic Trauma Update



The orthopaedic trauma service at Miami Valley Hospital continues to flourish. The trauma admission pace is similar at this point to that of 2010. Over 90

percent of our trauma admissions occur through a blunt mechanism of injury. Falls and motor vehicle collisions remain the two most common mechanisms of injury. July and August of 2011 were our busiest months ever on record with 351 and 358 trauma admissions respectively.

Ten faculty members (both academic and clinical) contribute to the orthopaedic trauma coverage at the hospital. Additionally, the orthopaedic trauma fellow, three orthopaedic residents (chief, R-3, intern), Diane Kimpel, R.N., and an emergency medicine resident, provide daily coverage and support for the service.

The orthopaedic trauma fellowship remains strong with full accreditation through the Accreditation Council for Graduate Medical Education (ACGME) and solid support from Miami Valley Hospital. Last year's graduate, Dr. K. Sunil Menon, is in private practice with an emphasis on fracture care in Coffeyville, Kansas. Our current fellow, Eric Verwiebe, M.D., will be assigned through his military commitment to a

three-year term in Landstuhl Regional Medical Center in Germany. This is the only Level I Trauma Center accredited by the American College of Surgeons outside the United States. Next year Kim Poludniansky, D.O., will join the fellowship from Mt. Clemens Regional Medical Center in Clemens, Michigan. The match for the 2013-2014 fellowship position will be held again in March 2012.

After much negotiation, we began a participation in the C-Stars Program (Center for Sustainment of Trauma and Readiness Skills) with Wright-Patterson Air Force Base (WPAFB). This has been effectively used with the general surgeons and allows surgeons from WPAFB to do clinical work at Miami Valley Hospital to keep their trauma skills up to date. It also serves as a good refresher course for them before deployment. Brandon Horne, M.D., is our first participant. He did his orthopaedic training in San Antonio and has been a welcome addition to our team. Miami Valley Hospital and Wright State University have a long history of collaboration with WPAFB, and we look forward to this new relationship in orthopaedics.

We look forward to another busy year in orthopaedic trauma at Miami Valley Hospital, providing crucial educational opportunities to our medical students, residents, and fellow.

– Michael Prayson, M.D.

Weddings

**Matthew Ross and
Mardi Mae Lu Joaquin**
May 22, 2011

**Michael Anderson and
Krista Swenson**
August 19, 2011

**Jason Vourazeris and
Amber Tudor**
October 8, 2011

**Michael Herbenick and
Wendy Stamas**
December 30, 2011

Births

Jackson Proctor Noyes
May 27, 2011
7lbs., 6 oz. ■ 21 in.
Matt and Elizabeth Noyes

John Steven Kleinhenz
September 8, 2011
8 lbs., 1 oz. ■ 22.5 in.
Ben and Julie Kleinhenz

Joseph Michael Deister
November 17, 2011
8 lbs., 13 oz. ■ 21.5 in.
Jacob and Brooke Deister

Savannah Faith Gayton
December 7, 2011
7lbs., 10oz. ■ 21 in.
Chris and Suzanne Gayton

New Residents and Fellows



Matthew Cavo, M.D.
The Ohio State University



Joe Cox, M.D.
University of Alabama
6-Year Research Track



Jacob Deister, M.D.
Wright State University
Boonshoft School of Medicine



Jedediah May, M.D.
Texas Tech University School of Medicine
6-Year Research Track



Eric Verwiebe, M.D.
Orthopaedic Trauma Fellow
M.D. – Uniformed Services UHSC
Residency – William Beaumont Army
Medical Center

Visiting Professors

2010

John G. Birch, M.D.

Professor, Department of Orthopaedic Surgery, University of Texas Southwestern Medical Center.
Assistant Chief of Staff and Medical Director of Ambulatory Care, Texas Scottish Rite Hospital for Children.

March 30-31, 2010:

History of the Ilizarov apparatus and use in a pediatric population; Classification and management of congenital fibular deficiency.

Jason H. Calhoun, M.D., F.A.C.S.

Professor and Chair, Department of Orthopaedics The Ohio State University College of Medicine.
June 18-19, 2010 – Graduation Symposium: The history of military orthopaedic infections; Surgical site infections in orthopaedics.

Anthony A. Romeo, M.D.

Professor and Director, Section of Shoulder and Elbow, Department of Orthopaedic Surgery, Rush University Medical Center.

November 2-3, 2010:

Biomechanical and biological augmentation of rotator cuff repairs; Surgical options for the management of arthritis in active patients.

2011

Aaron G. Rosenberg, M.D.

Professor of Orthopaedic Surgery, Rush Medical College.
March 15-16, 2011:
What's new? Evolution, innovation, and orthopaedics; Decision making: the essential clinical skill.

Alexander R. Vaccaro, M.D., Ph.D.

Everett J. and Marion Gordon Professor of Orthopaedic Surgery, Professor of Neurosurgery, Jefferson Medical College.
May 19-20, 2011 – Graduation Symposium: SCI: an update on translation studies; Evidence-based analysis of surgery for lumbar disc disease.

James J. Hutson, Jr., M.D.

Associate Professor of Clinical Orthopaedic Surgery, Valley Hospital, Leonard M. Miller School of Medicine, University of Miami.

November 1-2, 2011:

Tensioned wire assisted tibial nailing, supra patellar nailing, and the use of blocking screws to facilitate nailing of tibia fractures; A technique guide for orthopaedic trauma surgeons; The treatment of GIIIB-C tibia fractures with circular tensioned wire external fixation.

Sixth Annual Scientific Symposium

Orthopaedic Surgery Residency Program

Wright State University Boonshoft School of Medicine May 20, 2011

The sixth annual scientific symposium was held in May with Dr. Alexander R. Vaccaro, M.D., Ph.D., Everett J. and Marion Gordon Professor of Orthopaedic Surgery and Professor of Neurosurgery at Jefferson Medical College, serving as our visiting professor. Dr. Vaccaro presented "Evidence-Based Analysis of Surgery for Lumbar Disc Disease" to the members of the Dayton Orthopaedics Society at the Dayton Country Club the evening before he served as keynote speaker for the scientific symposium.

Alexander R. Vaccaro, M.D., Ph.D. (Visiting Professor)

SCI: An update on translation studies

Christopher B. Lyons, M.D. (R-3)

Mycobacterium avium complex infection of the lumbar spine

Mark H. Stouffer, M.D. (R-3)
Fracture ankylosing spondylitis

Indresh Venkatarayappa, M.D. (R-3)
Discitis following discectomy requiring anterior debridement/fusion

Michael J. Anderson, M.D. (R-4)
C 1-2 fracture dislocation

Benjamin P. Kleinhenz, M.D. (R-4)
Idiopathic scoliosis patient: Failed bracing and lost motor/surgery responses in the OR

Manny Konstantakos, M.D. (R-4)
Traumatic disk herniation in an adolescent football player

Matthew P. Noyes, M.D. (R-4)
Multiple myeloma with lower extremity weakness

Kenny B. Edwards, M.D. (R-5)
T-spine fracture/dislocation with neurological change

J. Adam Hamilton, M.D. (R-5)
Mycoplasma infection of the spine

Brad M. Picha, M.D. (R-5)
Spinal hemangioma

Seventh Annual Prosthetics Course

Michael D. Barnett, Jr., M.D., chaired the Seventh Annual Clinical Applications of Prosthetics & Orthotics course held March 11, 2011, at Miami Valley Hospital. Invited speakers presented the following educational sessions:

Michael A. Herbenick, M.D.
Sports management

Richard T. Laughlin, M.D.
Lower limb amputations

Carrie Melton, C.P.O.
Postoperative management
Below knee prosthetics

Above knee prosthetics

Dana L. Duren, Ph.D.
Normal human locomotion

Nicolas E. Grisoni, M.D.
Cervical pathologies

James T. Lehner, M.D.
Pediatric management
Pediatric bracing
Scoliosis

Mark Horwitz, C.P.O.
Extremity bracing

Michael D. Barnett Jr., M.D.
Pedorthic management

Department of Community Health Expands Residency ABOS Board Results

The Department of Community Health recently created the new Division of Morphological Sciences and Biostatistics. The Division was created within the Boonshoft School of Medicine, Wright State University in 2011 to unite scientists in the pursuit of excellence in biomedical research on the form and function of the human body. The primary mission of the Division is to:

- Conduct research within the morphological sciences and biostatistics relevant to public health.
- Disseminate knowledge in a timely and meaningful fashion to all those interested.
- Educate and train future leaders in the biomedical morphological sciences.

- Serve the community by providing a resource for knowledge and information.
- Serve as a model for scientific integrity.



Richard J. Sherwood, Ph.D.
(Community Health and Pediatrics), serves as director and faculty along with **Dana L. Duren, Ph.D.** (Community Health and Orthopaedic Surgery), and **Ramzi W. Nahhas, Ph.D.** (Community



Health). Affiliated WSU faculty include **Richard T. Laughlin, M.D.** (Orthopaedic Surgery), **Thomas N. Hangartner, Ph.D.** (Biomedical, Industrial, and Human Factors Engineering), and **Drew Pringle, Ed.D.** (Health, Physical Education, and Recreation and Orthopaedic Surgery).

Dr. Duren holds a joint appointment in Community Health and Orthopaedic Surgery, Sports Medicine & Rehabilitation. She is actively involved in many research projects with our department and serves on our department research committee.

Part I

Ryan P. Finnan, M.D. (2010)
Michael F. Iossi, M.D. (2010)
Paul G. Peters, M.D. (2010)
J. Adam Hamilton, M.D. (2011)
Brad M. Picha, M.D. (2011)

Part II – Board Certified

Brian K. Hutchinson, M.D. (2010)
Jerry Ahluwalia, M.D. (2011)
Matthew J. DiPaola, M.D. (2011)
Nicolas E. Grisoni, M.D. (2011)
Ross A. Schumer, M.D. (2011)

Subspecialty Certified – Orthopaedic Sports Medicine

L. Joseph Rubino, III, M.D. (2011)

38th Annual Graduation Ceremony

Dayton Country Club ■ June 18, 2011



Kenny B. Edwards, M.D. M.D. – Wright State University Boonshoft School of Medicine
Spine Fellowship – Texas Back Institute & Research Foundation

J. Adam Hamilton, M.D. M.D. – Creighton University
Private Practice – Lake Region Healthcare, Fergus Falls, Minn.

Brad M. Picha, M.D. M.D. – Case Western Reserve
Spine Fellowship – OrthoIndy

K. Sunil Menon, M.D. – Orthopaedic Trauma Fellow M.B.B.S./M.D. – Thrissur Medical College, Kerala, India
Master of Surgery – Kasturba Medical College, Manipal, Karnataka, India

Internship/Residency – Medical Colleges of Thrissur and Calicut, Kerala, India
Adult Reconstruction Fellowship – Duke University Medical Center
Master of Public Health – University of Maryland School of Public Health
Orthopaedic Surgeon – Coffeyville Regional Medical Center, Coffeyville, KS

Department Awards

First Place Basic Science – Matthew P. Noyes, M.D., and Indresh Venkatarayappa, M.D.

Dr. Edwards’ Mentor Award – Richard T. Laughlin, M.D.

Dr. Hamilton’s Mentor Award – Michael A. Herbenick, M.D.

Dr. Picha’s Mentor Award – Michael J. Prayson, M.D.

Teaching Excellence Award – James T. Lehner, M.D.



New Medical Office Building at Wright State University in 2012



The 66,000-square-foot, three-story building under construction on the northeast side of the Wright State University campus will offer a full array of physician care, including new neurology and sports medicine practices, as well as the existing practices in orthopedics, family medicine, geriatrics, and dermatology.

A new medical office and sports medicine building being constructed on the Wright State University campus will open ahead of schedule, with the first tenants taking residence in June, according to officials of Wright State Physicians (WSP), the region's largest multi-specialty group. The facility will provide much-needed medical care for the residents of Clark, Montgomery, and Greene Counties.

"June 1 is the new date of occupancy for the building," said WSP Chief Operating Officer Jocelyn Piccone, M.H.A., M.A., C.M.P.E. WSP corporate offices will be the first to occupy the facility, with clinical practices of the Departments of Dermatology, Family Medicine, Geriatrics, and Orthopaedic Surgery and Sports Medicine to follow, she said. Other early tenants will include CompuNet Clinical Laboratories and an MRI facility operated by Premier Health Partners, the Dayton region's leading hospital system.

"Consolidating five medical practices under one roof will give patients an improved one-stop medical care experience while reducing overhead costs," said Margaret Dunn, M.D., M.B.A., professor of surgery, executive associate dean at the Boonshoft School of Medicine and president and CEO of Wright State Physicians. "The new facility will also benefit WSU faculty, staff, and students, giving them access to expert multi-specialty care conveniently located on campus."

A consolidated sports medicine practice will help area athletes enhance performance while preventing and treating injury. It will include multidisciplinary rehabilitation including physical therapy, athletic training, primary care sports medicine, and orthopaedic surgery. Services will be provided by the same medical staffs that provide care as team physicians to the athletes at Wright State University and the University of Dayton.

"The facility will also provide a conveniently located clinical site for the education of our medical students," said Howard Part, M.D., dean of the WSU Boonshoft School of Medicine, "along with a clinical setting for our faculty to conduct translational research, which can move basic research from the lab to the bedside."

The new facility will help further WSP's mission to retain outstanding medical faculty and staff in support of the clinical, research, and community service activities of the university's medical school. The Boonshoft School of Medicine and Wright State Physicians are partners in providing training to medical students and delivering health care to the region.

General contractor for the building, designed by Dayton architect Kenneth J. Seidl, is locally based Miller-Valentine Commercial Construction LLC.

Department News

Matthew J. DiPaola, M.D., was awarded a Mid-America Orthopaedic Association Traveling Fellowship. He plans to spend time observing advanced elbow surgical techniques at the Mayo Clinic. He achieved board certification in orthopaedic surgery with the American Board of Orthopaedic Surgery, and has been researching a minimally-invasive rotator cuff repair procedure that improves a patient's recovery with less discomfort.

Michael A. Herbenick, M.D., will serve on the Nominating Committee for the Wright State University Boonshoft School of Medicine until June 2012.

L. Joseph Rubino, III, M.D., was certified by the American Board of Orthopaedic Surgery in the orthopaedic sports medicine subspecialty in February 2011. Dr. Rubino was appointed to serve on the Wright State Physicians Board of Directors until 2014 and also serves on the Management Committee as the Board of Directors' At Large Representative.

Michael J. Prayson, M.D., was appointed to the Fellowship Committee of the Orthopaedic Trauma Association. His three-year term will begin in 2012.

Graduation Research Symposium

The graduation research symposium was held on Friday, June 17, 2011, to highlight this year's resident research efforts.

Indresh Venkatarayappa, M.D. (R-3)

Reuse of external fixation components – patient survey

Jason D. Vourazeris, M.D. (R-2)

Fatty infiltration following semitendinosus tendon harvest in rabbits

J. Christopher Gayton, M.D. (R-2)

Rabbit fatty infiltration not caused by injury to motor endplate

Mark H. Stouffer, M.D. (R-3)

A comparison of periprosthetic fracture risk in long vs. short cephalomedullary nails: A biomechanical study

Brad M. Picha, M.D. (R-5)

Scaphalunate dissociation reconsidered

J. Adam Hamilton, M.D. (R-5)

Scapula fractures following reverse shoulder arthroplasty – classification and treatment

Emmanuel K. Konstantakos, M.D. (R-4)

Misrepresentation of research activity of orthopaedic applicants

Kenny B. Edwards, M.D. (R-5)

Distal clavicle fixation: A biomechanical evaluation of fixation

Benjamin P. Kleinhenz, M.D. (R-4)

Functional and radiographic long-term outcomes of hemiarthroplasty for proximal humerus fractures

Michael J. Coffey, M.D. (R-3)

Treatment of glenohumeral sepsis with a commercially-produced antibiotic-impregnated cement spacer

Ohio Orthopaedic Research and Innovation Day

Foundation Meeting June 2, 2011

According to the American Academy of Orthopaedic Surgeons, “More than 700,000 primary total hip and knee replacements are performed each year in the United States, and demand for the surgery is expected to double in the next 10 years. By 2030, there are expected to be 572,000 total hip replacements alone and 3.4 million total knee replacements.”

An open forum was held at Wright State University on June 2, 2011, to create strong academic and industry partnerships within the state and push the best ideas into the marketplace.

This ground-breaking event brought together engineers and orthopaedic clinicians and researchers, medical students, residents and fellows, biomedical engineering students of all levels, students from biomedical sciences, and advisors to exchange ideas and foster innovation in orthopaedic devices to spur economic development in Ohio.

Presenters were:

Amy Yousefi

Biomimetic Constructs for Cartilage Regeneration and Cartilage Replacement

Lei Kerr and Huiying Jia

Anodized TiO₂ Nanotube Film for Controllable Drug Delivery in the Implant

Dishita Patel

Influence of Design Parameters on Cup-Stem Orientations for Impingement free RoM in Hip Implants

S. Hueston, I. Mabe, M. Makola

Morphometry Analysis and Kinematic Response of the Cervical Spine

Rinki Goswami

Characterizing the Effects of Bromelain on the Mechanical Properties of Bovine Articular Cartilage

Sasidhar Uppuganti

In-Vitro Biomechanical Stability of Trans-Sacral L5-S1 Fusion

Nagmesh Kumar

In-Vitro Biomechanical Analysis of Cervical Open Door Laminoplasty

Mary Beth Wade

Mechanically Enhanced, Peptide Cross-linked Poly(ester ureas) for Critical Bone Defect Repair

Samuel Dwomoh

Biomechanical Evaluation of Annular Closure with Polyisobutylene Cyanoacrylate

Kushal Shah

All-Epiphyseal ACL Reconstruction Improves Tibiofemoral Contact

Timothy Norman

In-Service Damage Accumulation and Mineralization Heterogeneity in Human Femoral Cortical Bone

Melinda S. Peiserich

Medical Polymers—Evolution and Future and Gender Specific Implants

Richard Laughlin, M.D., and

Anil Krishnamurthy, M.D.

Case Studies in Orthopaedic Surgery

Mark A Snyder, M.D., Sambhu

Choudhury, M.D., Kathryn

Eten, BSN, CCM

Current Concepts in Total Hip and Knee Arthroplasty “Zero in on Zero” New Horizons in Quality and Safety

David Kirschman, M.D.

In Vivo and In Vitro Biomechanical Performance of a Novel Pedicle Screw System: A Two-Year Retrospective Analysis

Michael Lawrenchuk

Innovations in Medical Image Processing for the Design of Custom Medical Devices and Implants

Shirish Ingawale

Subject-specific Modeling and Finite Element Assessment of Mandible and the TMJ Implant

J. Adam Hamilton and John Dundon

The Cannulated Screw Core: Improving the Mechanical Properties of Cannulated Screws

John Cotton

Mechanical Modeling of the Porcine Temporomandibular Joint

Brian Yeakley

Increased Aircrew Helmet Protection

Archana Saranathan

A System for Characterization of In Vivo Patellofemoral Motion

Matthew Coombs

Spinal Hemiepiphysiodes Modify Growth

Greg Gould

Research at Wright State's Biomechanical Lab

Bradley Elliott

Hip Implant Micromotion and Resulting Femoral Canal Damage for Several Implant Materials

Erik Kane

Three Dimensional Finite Element Analysis of Intramedullary Nails for Size



The Division of Plastic Surgery continues to develop and evolve over time. We have recently achieved initial accreditation as a six-year fully integrated

program. This is a change from the former three-plus-three combined program with general surgery. This change was mandated by the American Board of Plastic Surgery with all “combined” programs being eliminated as a pathway to board certification by 2015. The independent programs—after achieving board certification in general surgery, orthopaedics, neurosurgery, ENT, and oral surgery—still exist as a pathway in some institutions. The demand for these positions has decreased dramatically in recent years.

We have relocated the tissue engineering lab to the office in Suite 6257. We have a hood, microscopes, -80F freeze incubator, and flow cytometers as current lab equipment. We anticipate the proximity of the lab to the patient care area and to the residents will improve interest in translational research. We also continue to develop relationships with Shawn Hunter, Ph.D., at Community Tissue Services (CTS). Greg Gould is currently training to also provide technical support in the cell culture lab. Mary Blackmore, Ph.D., continues to direct and develop the research program both in our lab and at CTS.

Clinically, we continue to develop the microsurgical program and have initiated a microsurgical autogenous breast reconstruction program at Good Samaritan Hospital to complement the program at Miami Valley Hospital.

Our former residents are doing well after completing training. Todd Hicks, M.D., is performing the majority of head and neck reconstruction at Kettering Medical Center with Chuck Zeller, D.O. Parvis Goshtasby, M.D., is in private practice in Orange County, California, and Salim Mancho, D.O., is completing his craniofacial fellowship at Children’s Hospital of Los Angeles.

Ben and Michelle Monson welcomed Nolan Jack to their family on October 17, 2011, and Colin and Anna Rymer welcomed Bryn Elizabeth to their young family on December 2, 2011.

At our awards banquet, Sunishka Wimalawansa, M.D., won the Academic Achievement Award. Matthew Fox, M.D., was awarded the Teacher of the Year honor. The Chief’s Award went to Tom Arquilla, J.D., and Ryan Shapiro.

Many thanks go out to Nancy Bates, Residency Program Coordinator, for her continued hard work. She continues to make a very difficult job look easy. The residents and program directors would also like to acknowledge the outstanding contributions of the voluntary faculty including:

Rannie AlSamkari, M.D.
Atul N. Balwally, M.D.
Peter S. Barre, M.D.
Chris J. Danis, M.D.
Matthew J. Fox, M.D.
Todd L. Hicks, M.D.
Reza Miremadi, M.D., D.D.S.
William C. Rigano, M.D.
Steve P. Schmidt, M.D.
Ronald E. Warwar, M.D.

The program definitely would not be able to perform without the help of the clinical staff as well. We look forward to the 2012 match with a number of excellent applicants this year.
—R. Michael Johnson, M.D.

Dr. Blackmore Brings Tissue Engineering to Division

Mary E. Blackmore, Ph.D., joined the Division of Plastic Surgery in May as director of the Regenerative Medicine Collaboration Initiative. Since she arrived, Dr. Blackmore organized and launched the Tissue Engineering and Cellular Biology Lab, in collaboration with the Community Tissue Services Center for Tissue Innovation and Research in Dayton. The purpose of this lab is to conduct adipose stem cell research to develop various types of human tissues needed in wound healing and tissue regeneration. Dr. Blackmore runs this laboratory and its associated research projects.

Dr. Blackmore received her bachelor’s in mechanical engineering from the Rose-Hulman Institute of Technology in Terre Haute, Ind., and her master’s in mechanical engineering/biomechanics from Grand Valley State University in Allendale, Mich. She earned her doctorate in mechanical engineering from the University of Dayton with her

dissertation, “A comprehensive series for predicting bone dynamics: Forecasting osseous tissue formation using the molecular structure of a biomaterial.”

Upon completing her doctorate, Dr. Blackmore served as a research assistant professor in the Wright State University Department of Biomedical, Industrial, and Human Factors Engineering until funding was no longer available, performing research and teaching undergraduate classes. She served as part-time professor at the University of Dayton, teaching undergraduate courses in Engineering Experimentation, Materials Laboratory, and Engineering Innovation.

In Dr. Blackmore’s role with plastic surgery and orthopaedic residents, she is training them on the fundamentals of tissue engineering. She is currently developing a website with training modules to assist residents in their learning experience.

New Plastic Surgery Residency Coordinator

This past June, the Division of Plastic Surgery welcomed Nancy L. Bates as the new residency coordinator. Nancy previously served as the medical education coordinator for the Wright State University Boonshoft School of Medicine Department of Family Medicine. Taunia Robinson, B.S./B.A., who joined Grandview Medical Center’s Medical

Education Department, had worked for Dr. Johnson and the division for the past 10 years. Taunia was honored at the June 2010 graduation ceremony with the Gregory E. Maupin Chief’s Award for Outstanding Contributions to Plastic Surgery. We wish Taunia well in her new endeavor as we welcome Nancy to the Division of Plastic Surgery.

Births

Nolan Jack
Ben and Michelle Monson
October 17, 2011

Bryn Elizabeth
Colin and Anna Rymer
December 2, 2011

Update from the Director of Tissue Engineering

Tissue Engineering and Cellular Biology Lab

The Community Tissue Services (CTS) Center for Tissue Innovation and Research has been making tremendous strides in advancing its participation in cutting edge research. The lab itself has state-of-the-art equipment and is second to none in terms of space and possibilities. We have an area dedicated solely to tissue processing and cell culturing. Additionally, we have a second, separate lab space dedicated to characterization and analysis. Shawn Hunter, Ph.D., is the director of the Research and Development Department at CTS. Dr. Hunter, along with Dr. Johnson, Dr. Laughlin, and Dr. Blackmore, see very favorable and productive future for Wright State Physicians, CTS, and Miami Valley Hospital. Through this unique collaboration, we will be able to interactively gain knowledge and experience associated with tissue engineering. This opens the door to understanding how engineers, physicians, residents, and scientists are all needed to successfully develop the strong and dependable tissue engineering research program that will benefit the entire Greater Dayton area.

Resident Training Website

As research director for Wright State Plastic Surgery and the Division of Plastic Surgery, the goal is to successfully teach both plastic surgery and orthopaedic residents about the fundamentals of tissue engineering. To make this a very efficient and valuable experience for the residents, a website is being developed, which will give them access to valuable resources and materials needed as they progress through the research program. Because the amount of material is quite vast and advanced, it has been broken down into manageable modules. The modules will be completed by the residents as they

simultaneously work to design, carryout, and analyze their own unique experiments. This experience is not only meant to teach them about tissue engineering and working in the lab, but the outcome of their experience will provide knowledge they can take with them into their own practice, as well as a publishable paper. Some of the topics include basics of cellular biology, introduction to biomaterials, tissue/biomaterial interactions, basic tissue and cell culturing techniques, designing a successful experiment, tissue/cell characterization, and various methods for data analysis. Just as tissue engineering is a field requiring knowledge of several different disciplines (medicine, engineering, science, biology, and math), the residents will be introduced to the education and skills associated with these disciplines, making their future medical practices that much more valuable. The first "generation" of tissue engineering involved biomaterials and realms of knowledge that focused strictly on engineering practice. We have now entered tissue engineering's second "generation," an era in which interactive learning and the collaboration of several different disciplines remains in the forefront of the field's success.

– Mary E. Blackmore, Ph.D.

Current Residents

Lindsay Abbott, M.D.

University of Kansas School of Medicine, Kansas City, Ks.

Maximilian Malotky, M.D.

University of Arkansas for Medical Sciences College of Medicine, Little Rock, Ar.

Visiting Professors

January 19, 2010

William C. Rigano, M.D.

Advanced Breast & Cosmetic Surgery, Inc., Kettering
Clinical Assistant Professor,
Division of Plastic Surgery,
Wright State University Boonshoft
School of Medicine.
Out of Africa, mission trip.

January 18, 2011

Navin K. Singh, M.D., M.B.A., M.S.

Assistant Professor of Plastic Surgery
Johns Hopkins University School
of Medicine.
Innovations in breast
reconstruction and revision.

April 19, 2011

Michael W. Neumeister, M.D.

Chair & Program Director,
Division of Plastic Surgery,
Southern Illinois University School
of Medicine.
Botox treatment for Raynaud's and
chronic pain.

July 19, 2011

Frank E. Barone, M.D.

Clinical Professor of Surgery,
Section of Plastic Surgery,
Medical College of Ohio.
Breast reconstruction.

October 18, 2011

David A. Billmire, M.D.

Professor of Clinical Surgery,
Division of Plastic, Reconstructive
and Hand Surgery, University of
Cincinnati Medical Center,
College of Medicine.
Craniofacial surgery.

Graduation



Sycamore Creek Country Club June 11, 2011

The Division of Plastic Surgery enjoyed a graduation celebration in honor of 2011 graduate Salim N. Mancho, D.O., who was awarded a craniofacial fellowship at LA Children's. Dr. Mancho earned a bachelor's in biology at Lebanon Valley College in Annville, Penn. before receiving his doctorate from the Ohio University College of Osteopathic Medicine. He started his general surgery residency at Medical College of Ohio, and completed his training at Medical University of Ohio, University of Toledo Medical Center, prior to joining our division in 2008.

Division of Plastic Surgery Awards

Outstanding Teaching Award –
Matthew J. Fox, M.D.

Academic Achievement Award –
Sunishka M. Wimalawansa, M.D.

**Gregory E. Maupin Chief's
Award for Outstanding
Contributions to Plastic
Surgery** – Thomas J. Arquilla,
J.D., M.B.A.

Francisco Sanchez-Navarro, M.D.

University of Iowa Roy J. &
Lucille A. Carver College of
Medicine, Iowa City, Iowa

Sunishka Wimalawansa, M.D.

Baylor College of Medicine
Houston, Texas

M. Colin Rymer, M.D.

West Virginia University School
of Medicine,
Morgantown, W. Va.

Scholarly Activity

Bolded names indicate current faculty, joint-appointed faculty, and residents.

Publications

Coffey MJ, Ely EE, Crosby LA. Treatment of glenohumeral sepsis with a commercially produced antibiotic-impregnated cement spacer.
 • *J Shoulder Elbow Surg.* 2010 Sep;19(6):868-73. Epub ahead of print 2010 Apr 14.
 • Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.

Crosby LA, **Hamilton A**, Twiss T. Scapula fractures after reverse total shoulder arthroplasty: classification and treatment.
 • Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
 • *Clin Orthop Relat Res.* 2011 Sep;469(9):2544-9.

Dulaney-Cripe E, Herbenick MA. Magnuson-Stack procedure. *eMedicine.* Updated April 2011. <http://emedicine.medscape.com/article/1894433-overview>.

Dulaney-Cripe E, Herbenick MA. Putti-Platt procedure. *eMedicine.* Updated April 2011. <http://emedicine.medscape.com/article/1894455-overview>.

Dulaney-Cripe EM, Laughlin RT. Metal ankle joint replacement devices. <http://emedicine.medscape.com/article/1983424-overview>. Updated July 2011.

Dundon J, Lawless M, Markert RJ. Correlation between patella and patellar tendon width: an anatomic study. *Clinical Anatomy.* Epub ahead of print 2011 Aug 18.

Ellis CJ. Diabetic triathletes: get a safe start into triathlons. <http://www.beginnertriathlete.com/cms/article-detail.asp?articleid=1506&printer=1>. March 2011.

Ellis CJ. How can I recover from a groin injury in one month? <http://www.beginnertriathlete.com/cms/article-detail.asp?articleid=2196&printer=1>. March 2011.

FLOW Investigators (includes Lakatos R, **Coffey MJ**, **Vourazeris J, Prayson MJ**), et al. Fluid lavage of open wounds (FLOW): a multicenter, blinded, factorial pilot trial comparing alternative irrigating solutions and pressures in patients with open fractures. *J Trauma.* 2011 Sep;71(3):596-606.

Gayton JC, Sensiba P, Imbrogno BF, **Venkatarayappa I**, Tsatalis J, **Prayson MJ.** The effects of magnetic resonance imaging on surgical staples: an experimental analysis. *J Trauma.* 2011 May;70(5):1279-81.

Goswami T, Patel V, Dalstrom DJ, **Prayson MJ.** Mechanical evaluation of fourth-generation composite femur hybrid locking plate constructs. *J Mater Sci Mater Med.* 2011 Sep;22(9):2139-46. Epub ahead of print 2011 Jul 17.

Guittton TG, Ring D, Science of Variation Group Participants (includes **Prayson MJ**). Interobserver reliability of radial head fracture classification: two-dimensional vs. three-dimensional computed tomography.
 • Presented at the Adrian E. Flatt Resident & Fellows Conference, Boston, MA, October 2010.
 • Presented at the 65th Annual ASSH Meeting, Boston, MA, October 2010.
 • Presented at the Dutch Orthopaedic Association Annual Meeting, Groningen, Netherlands, January 2011.
 • *J Bone Joint Surg Am.* 2011 Nov 2;93(21):2015-21.

Konstantakos EK, Crosby LA. Shoulder pain in a 57-year-old man. *MedscapeCME Case Presentations.* <http://www.medscape.org/viewarticle/709510>. 2010.

Laughlin RT, Konstantakos EK, Randall KL. Bunion. *eMedicine.* Updated October 2011. Available at: <http://emedicine.medscape.com/article/1235796-overview>.

Noyes MP, Herbenick MA. Metal elbow joint replacement devices. *eMedicine.* Updated June 2011. <http://emedicine.medscape.com/article/1983446-overview>.

Noyes MP, Kleinhenz B, Markert RJ, Crosby LA. Functional and radiographic long-term outcomes of hemiarthroplasty for proximal humerus fractures.
 • *J Shoulder Elbow Surg.* 2011 Apr;20(3):372-7. Epub ahead of print 2010 Oct 6.
 • Presented at the Ohio Orthopaedic Society, Columbus, OH, May 2011.
 • Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.

Perry TL, Heysse RP, Little A, **Johnson RM.** Large flap preservation in a patient with extensive necrotizing fasciitis. *Wounds.* 2010 Jun;22(6):146-50.

Shaw JM, Hunter SA, **Coffey MJ**, Locous GS, **Gayton JC, Stouffer MH, Boivin GP, Prayson MJ.** Repeated freeze-thaw cycles do not alter the biomechanical properties of fibular allograft bone. *Clin Orthop Relat Res.* Epub ahead of print 2011 August 24.

Vourazeris JD, Herbenick MA. Bristow procedure. *eMedicine.* Updated April 2011. <http://emedicine.medscape.com/article/1894367-overview>.

Accepted for Publication

Dalstrom D, **Nelles D**, Patel V, **Goswami T, Markert RJ, Prayson M.** The protective effect of locking screw placement on nonlocking screw extraction torque in an osteoporotic supracondylar femur fracture model. *J Orthop Trauma.* In press. 2011.

Dulaney-Cripe E, Hadaway S, Bauman R, Trame C, Smith C, Sillaman B, **Laughlin RT.** A continuous infusion fascia iliaca compartment block in hip fracture patients: a pilot study. *J Clin Med Res.* Accepted for publication October 2011.

Peters PG, Laughlin RT, Markert RJ, Nelles D, Randall KT, **Prayson MJ.** Time of exposure to C-arm drape contamination. Accepted by *Surgical Infections* 2011.

Submitted for Publication

Dulaney-Cripe EM, Prayson MJ. Knee spanning ex-fix. *eMedicine.* Submitted June 2011.

Estes K, **Goswami T, Lawless MW, Laughlin RT.** ACL injury: biomechanics and prediction model. *Injury.* Submitted August 2011.

Gayton JC, Rubino LJ, Stouffer M, Wang Q, Rich MM, **Boivin GP.** Rabbit supraspinatus motor endplates are unaffected by a rotator cuff tear.
 • *J Shoulder Elbow Surg.* Submitted 2011.
 • Poster 538 presented at the Orthopaedic Research Society Annual Meeting, San Diego, CA, February 2011.
 • Presented at the Mid-America Orthopaedic Association Annual Meeting, Tucson, AZ, April 2011.
 • Poster presented at the 12th Annual DAGMEC Resident Research Forum, Dayton, OH, April 2011.
 • Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
 • Poster #240 presented at the American Association for Laboratory Animal Science National Meeting, San Diego, CA, October 2011.

Iossi MF, **Konstantakos EK**, Teel DD, Sherwood RJ, **Laughlin RT, Coffey MJ, Duren DL.** Musculoskeletal function following bariatric surgery. *Obesity.* Submitted 2011.

Nelles DN, Prayson MJ. Short-arm splinting. *eMedicine.* Submitted July 2011.

Science of Variation Group (participating member **Prayson MJ**). The effect of training on inter-observer reliability for the diagnosis of scaphoid fracture displacement.
 • *J Bone Joint Surg* Submitted 2010.
 • Presented at the Adrian E. Flatt Resident & Fellows Conference, Boston, MA, October 2010.

Presentations

Barnett MD. Heels to toes: treatment of common foot ailments in the primary care setting. Community continuing medical education event presented in Beavercreek, OH, October 2011.

Barnett MD. Pedorthic management. Symposium Chair. Presented at Clinical Applications of Prosthetics & Orthotics, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, March 2011.

Binski JB. Corticotomy techniques • Billing & coding. Presented at the Essentials of External Fixation Meeting, New York, NY, June 2011.

Binski JB. Hindfoot injury. Presented at the Masters Fracture Forum, Huntington Beach, CA, May 2011.

Binski JB. How do I correct the tibia? • Taylor Spatial Frame & trauma • Advanced deformity techniques, spatial fixators. Presented at the Extremity Reconstruction Deformity Course, Istanbul, Turkey, October 2011.

Binski JB. Is iliac crest still the gold standard? Presented at the Limb Lengthening & Reconstruction Society Specialty Day, American Academy of Orthopaedic Surgeons Annual Meeting, San Diego, CA, February 2011.

Binski JB. Six axis correction with external fixation. Presented at the 21st Annual Baltimore Limb Deformity Course, Baltimore, MD, September 2011.

Binski JB. Why my computer-assisted device is better than yours • Taylor Spatial Frame: the ultimate tool for computer-assisted complex deformity correction • adult deformities • reconstruction of malconsolidation, pseudoarthrosis, infection and bone resection. Instructional Course Sessions presented at the 6th Annual International ASAMI Meeting, Barcelona, Spain, October 2010.

Binski JB. Wrist and forearm applications • Billing and coding. Presented at the Advance Taylor Spatial Frame Meeting, 21st Annual Baltimore Limb Deformity Post Course, Baltimore, MD, September 2011.

Dulaney-Cripe EM. Publication rates of research presented at the Mid-America Orthopaedic Association Annual Meetings. Poster presented at the 12th Annual Dayton Area Graduate Medical Education Community (DAGMEC) Resident Research Forum, Dayton, OH, April 2011.

Duren DL. Normal human locomotion. Presented at Clinical Applications of Prosthetics & Orthotics, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, March 2011.

Edwards KB, Rubino LJ, Gould G, Herbenick MA, Goswami T. Distal clavicle fixation: a biomechanical evaluation of fixation. Presented at the Resident Research Symposium, Department of Orthopaedic

- Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
- Ellis CJ.** Joint health. Presented at Think TV's Speaking of Women's Health, Dayton, OH, November 2011.
- Ellis CJ.** OHSAA & NCAA guidelines for concussions. Presented at Flying to New Heights, the Ohio Athletic Trainers' Association Symposium, Dayton, OH, May 2011.
- Ellis CJ.** The station/school based pre-participation physical evaluation (PPPE): point-counterpoint. Presented at the 2nd Annual Sports Medicine Symposium, Miami Valley Hospital, Dayton, OH, September 2011.
- Gould G.** Research at Wright State's Biomechanical Lab. Presented at the Ohio Orthopaedic Research and Innovation Day, Wright State University, Dayton, OH, June 2011.
- Hamilton JA, Dundon J.** The cannulated screw core: improving the mechanical properties of cannulated screws. Presented at the Ohio Orthopaedic Research and Innovation Day, Wright State University, Dayton, OH, June 2011.
- Herbenick MA.** HAGL lesion: the unknown shoulder issue. Presented at Flying to New Heights, the Ohio Athletic Trainers' Association Symposium, Dayton, OH, May 2011.
- Herbenick MA.** Humeral avulsion of glenohumeral ligament (HAGL) lesions: an uncommon cause of shoulder instability. Presented at the Ohio Athletic Trainers' Association Annual Meeting, Dayton, OH, May 2011.
- Herbenick MA.** Knee bracing: clinical indications and use in the young athletic population. Presented Clinical Applications of Prosthetics & Orthotics, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, March 2011.
- Herbenick MA.** Return to play (RTP) after orthopaedic surgery: what to look for. Presented at the 2nd Annual Sports Medicine Symposium, Miami Valley Hospital, Dayton, OH, September 2011.
- Herbenick MA.** Sports management. Presented at Clinical Applications of Prosthetics & Orthotics, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, March 2011.
- Herbenick MA.** Surgical treatment of the shoulder • Surgical treatment of the elbow. Presented at the Wright State University Athletic Training Class, Dayton, OH, September 2010.
- Herbenick MA.** Upper extremity orthopaedic surgery. Presented at the University of Dayton Doctorate Physical Therapy Program, Dayton, OH, September 2010.
- Herbenick MH, Rubino LJ.** Common upper extremity problems seen in the PCP office. Community educational event presented in Dayton, OH, November 2011.
- Johnson RM.** The relationship of the burn patient's cognitive level as measured by ACLs and perceived quality of health • Cellular responses to inhalation anhydrous ammonia burns • Reconstruction of golf cart induced fourth degree hand and facial burns. Presented at the Eastern Great Lakes Burn Association Annual Meeting, Cincinnati, OH, September 2010.
- Konstantakos EK, Crosby LA.** Utilizing a proximal femoral allograft to obtain shoulder arthrodesis. Presented at the American Academy of Orthopaedic Surgeons Annual Meeting, New Orleans, LA, March 2010.
- Konstantakos EK, Laughlin RT, Marker RJ, Crosby LA.** Misrepresentation of research activity of orthopaedic applicants. Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
- Laughlin RT.** Hip fractures in the elderly. Presented at the Geriatric Medicine Fellowship Grand Rounds, Department of Geriatrics, Wright State University Boonshoft School of Medicine, Dayton, OH, February 2011.
- Laughlin RT.** LisFranc and midfoot injuries. Presented at the Ohio Athletic Trainers' Association Annual Meeting, Dayton, OH, May 2011.
- Laughlin RT.** Lower limb amputations. Presented at Clinical Applications of Prosthetics & Orthotics, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, March 2011.
- Laughlin RT, Goswami T.** Case studies in orthopaedic surgery – **Co-Moderator.** Ohio Orthopaedic Research and Innovation Day, Wright State University, Dayton, OH, June 2011.
- Lawless MW.** My aging knee. Community educational event presented at the Vandalia Recreation Center, Vandalia, OH, May 2011.
- Picha B, Gordon DA, Konstantakos EK.** A new look at scaphalunate dissociation. Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
- Prayson MJ.** Clavicle fractures. Featured expert for Smith & Nephew's "Ask the Expert" International Sales Training Webcast event (40 participants), January 2011.
- Prayson MJ.** Hindfoot injuries. Presented at the Masters Fracture Forum, Huntington Beach, CA, May 2011.
- Prayson MJ.** The effect of locking plugs on the strength of a locking plate construct in an osteoporotic model. Presented at the American Academy of Orthopaedic Surgeons Annual Meeting, San Diego, CA, February 2011.
- Shapiro R, McNulty D, Shapiro M, Markert RJ, Miller S, Gilchrist J, Perry T, Johnson M.** Relationship of the patient's ability to learn and long-term quality of life and psychosocial rehabilitation of burn patients.
 - Presented at the Eastern Great Lakes Burn Study Group, Cincinnati, OH, September 2010.
 - Presented at the American Burn Association Annual Meeting, Chicago, IL, March 2011.
- Stouffer M, Gayton JC, George A, Venkatarayappa I, Prayson MJ.** Assessment of periprosthetic fracture risk with short and long cephalomedullary nails: a biomechanical study.
 - Presented at the 29th Annual Mid-America Orthopaedic Association Meeting, Tucson, AZ, April 2011.
 - Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
- Venkatarayappa I, Sensiba P, Laughlin RT, Binski JB, Prayson MJ.** A survey of patient opinions regarding the use of reprocessed external fixation components. Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
- Vourazeris J, Lawless M, Markert RJ, Burleson A, Boivin G.** Semitendinosus muscle fatty infiltration following tendon resection in rabbits.
 - Poster 1666 presented at the Orthopaedic Research Society Annual Meeting, Long Beach, CA, January 2011.
 - Presented at the Mid-America Orthopaedic Association Annual Meeting, Tucson, AZ, April 2011.
 - Poster presented at the 12th Annual DAGMEC Resident Research Forum, Dayton, OH, April 2011. **Earned 2nd Place Award.**
 - Presented at the Resident Research Symposium, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.

Awards and Honors

- Delcamp J, LaFleur B.** First Place Award/Highest Final Exam Score. Awarded at the Pathology/Tumor Course, Gainesville, FL, October 2011.
- Di Paola MJ.** Traveling Fellowship Grant. Awarded by the Mid-America Orthopaedic Association, August 2011.
- Herbenick MA.** Teaching Excellence Award. Presented by the graduating residents, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011
- Kleinhenz B.** Functional and radiographic long term outcomes of hemiarthroplasty for proximal humerus fractures. Top Three Paper Award. Presented at the Ohio Orthopaedic Society Annual Meeting, Columbus, OH, May 2011.
- Konstantakos EK.** Current Concepts Foundation Scholarship for the May 2011 Current Concepts in Joint Replacement (CCJR) Meeting. Awarded April 2011.
- Laughlin RT.** Teaching Excellence Award. Presented by the graduating residents, Department of Orthopaedic Surgery, Wright State University Boonshoft School of Medicine, Dayton, OH, June 2011.
- Noyes M.** Best Orthopaedic Teaching Resident Award. Presented by the Journal of Orthopaedic Trauma, July 2010.
- Vourazeris J.** Semitendinosus muscle fatty infiltration following tendon resection in rabbits. 2nd Place Award presented at the Dayton Area Graduate Medical Education Community (DAGMEC) Resident Research Forum, Dayton, OH, April 2011.

Grants and Research

- Binski JB.** OP-1 Study.
- Dulaney-Cripe EM, Boivin GP.** Adipose tissue-derived stem cells to improve tendon-to-bone repair. ConMed Linvatec Young Investigator Grant. American Orthopaedic Society for Sports Medicine.
- Goshtasby AA, Dong G, Miller SF, **Johnson RM**, Tarpey TH. Computer assisted diagnosis of skin burn depth.
- Johnson RM, Kelly E, Shapiro R.** Human tissue repository (VACP2007-24).
- Laughlin RT.** Allograft assisted orthopaedic tissue repair.
 - Ohio Third Frontier Grant Program.
 - Wright State University Boonshoft School of Medicine.
- Laughlin RT, Anderson M, Vourazeris J.** Lateral entry retrograde reaming of the femur to obtain autogenous bone graft with the Reamer Irrigator Aspirator system. DAGMEC Grant.
- Perry T, **Johnson RM, Shapiro R, Kelly E, Shapiro M.** Clinical investigation of the MoorLDLS-BI for burn healing potential assessment. Multicenter study. Moor Instruments, Ltd.
- Perry T, **Johnson RM, Shapiro R.** VACP-2005-009: a randomized, controlled trial examining cellular energetics related to various wound treatment therapies.
- Prayson MJ.** Fixation using alternative implants for the treatment of hip fractures (FAITH). University of Minnesota.
- Prayson MJ.** Fluid lavage of open wounds (FLOW): a multi-center, blinded, factorial trial comparing alternative irrigating solutions and pressures in patients with open fractures. Greenville Hospital System.
- Shapiro M, Miller SF, Goshtasby AA, **Johnson RM, White MJ.** Development of digital photographic image analysis and data mining tools for improving the clinical diagnosis of skin cancers.



UPCOMING EVENTS

ORTHOPAEDIC SURGERY

**Visiting Professor
Dayton Orthopaedic
Society Meeting**
Dayton Country Club
Spring 2012

Charles A. Rockwood Jr., M.D.
Professor and Chairman
Emeritus, Orthopaedic Surgery
University of Texas Health
Science Center at San Antonio
Dayton Orthopaedic Society
Dayton Country Club
May 3, 2012, 6:30 p.m.

**Graduation Scientific
Symposium**
May 4, 2012

**Graduation Dinner and
Ceremony**
Dayton Country Club
June 8, 2012

Robert Bourne, M.D.
Professor of Surgery
University of Western Ontario
Dayton Orthopaedic Society
Dayton Country Club
September 25, 2012

**Current Concepts in
Musculoskeletal Care**
Wright State Orthopaedic
Surgery, Sports Medicine &
Rehabilitation
Berry Room, Nutter Center,
Wright State University
October 26, 2012

Holiday Party
Dayton Country Club
December 13, 2012

**Orthopaedic Surgery
Residency Interviews**
Dayton, OH
January 2013

**Orthopaedic Surgery
Alumni Reception**
AAOS Annual Meeting
Chicago, IL
March 22, 2013

PLASTIC SURGERY

Armand R. Lucas, M.D.
Department of Plastic Surgery
Cleveland Clinic
Dayton Plastic Surgery
Society Meeting
Dayton Marriott
April 17, 2012

**Plastic Surgery Graduation
Plastic Surgery Residency
Program**
Sycamore Country Club
June 16, 2012

**Dayton Plastic Surgery
Society Meeting**
Dayton, OH
July 2012

**Dayton Plastic Surgery
Society Meeting**
Dayton, OH
October 2012

**American Society of Plastic
Surgeons Annual Meeting**
New Orleans, LA
October 26-30, 2012

**Plastic Surgery Residency
Interviews**
Dayton, OH
December 2012/January 2013

**Send your news to
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