



**DEPARTMENT OF ORTHOPAEDIC  
SURGERY**

**10<sup>TH</sup> ANNUAL ROBERT D. D'AMBROSIA  
LECTURESHIP & RESEARCH DAY**

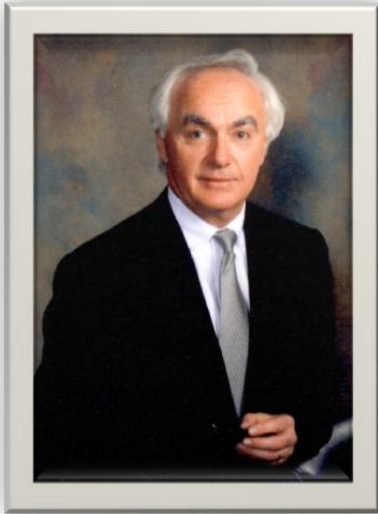
**JUNE 22, 2013**

## Schedule of Events

7:30 am- 8:00 am	Continental Breakfast**
8:00 am - 8:15 am	<b>Andrew G. King, MD</b> / Department Chairman Opening Remarks
8:15 am - 8:45 am	<b>Mr. Haemish Crawford</b> , CHNOLA Guest Speaker <i>Adult Sequelae of Pediatric Hip Disorders</i>
8:45 am - 9:15 am	Research Updates from <b>Christopher Marrero, MD,</b> <b>Mandi Lopez, PhD and Vinod Dasa, MD</b>
9:15 am – 9:25 am*	<b>Brandon Donnelly, MD</b> / Chief Resident <i>Relationship Between Visually Estimated Blood Loss &amp; Change in Hematocrit in Total Joint Reconstruction</i> Faculty Advisor: Vinod Dasa, MD
9:30 am – 9:40 am*	<b>Katy Morris, MD</b> / Chief Resident <i>Monosegmental Circumferential Fusion for Spondylolisthesis Using Combined Approach in Adolescents</i> Faculty Advisor: Andrew King, MD
9:45 am – 10:00 am	BREAK**
10:00 am – 10:10 am*	<b>Sushant Ghate, MD</b> / Fellow <i>Hemi-epiphysiodesis for Gradual Guided Correction of Angular Deformities at Knee in Skeletally Immature Patients</i> Faculty Advisor: Stephen Heinrich, MD
10:15 am – 10:25 am*	<b>Blaine Walton, MD</b> / Chief Resident <i>A Cost Analysis of Fixation Versus Nonoperative Treatment for Adult Midshaft Clavicle Fractures Using Multiple Randomized Controlled Trials</i> Faculty Advisor: Keith Melancon, MD
10:30 am – 10:40 am*	<b>Jeffrey Witty, MD</b> / Chief Resident <i>Fragility Fractures: Is LSU Using This Teachable Moment Effectively?</i> Faculty Advisor: Vinod Dasa, MD
10:45 am – 11: 30 am	<b>Mark Steven Vrahas, MD</b> / Guest Speaker Chief, Partners Orthopaedic Trauma Services Associate Professor of Orthopaedic Surgery, Harvard Medical School <i>The Use of Modern Outcome Measures in Clinical Practice</i>
11: 30 am – 11:45 am	<b>Closing Remarks</b>

\*Denotes there will be 5 minutes of Q & A followed by the presenter's talk.

\*\*Food and Drinks provided by Zimmer



**Andrew G. King, MD**  
**Department of Orthopaedic Surgery**  
**Department Chairman**

Every residency program in the US is a little different from one another. Each has its signature, its strong points and its not so strong points. The signature becomes self perpetuating, since it attracts resident applicants who feel they fit the profile. At LSU we are justly proud of a signature that stresses practicality, the ability to operate, and the ability to handle trauma.

So where does research fit in? The program we have today clearly shows that a practical hands-on, operative program can still generate interesting and meaningful research. We have the resources, through the consortium for musculoskeletal research, and in particular with the leadership of Mandi Lopez, PhD and Jeff Gimble, MD, PhD to carry out stem cell research, osteoinductive proteins and cytokines, and the ability to pursue national grants. We have benefitted from a close association with Steve Cook, PhD and his lab, and the important industry related work he is involved in through the Brown foundation. In addition, we also have a trauma database at University Hospital that allows clinical outcomes research, particularly on trauma cases, along with an excellent basic science research faculty here in the Health Science Center.

Furthermore, the new LSU system wide resource of electronic medical records will allow data to be more easily accessible allowing greatly expanded numbers for clinical research. As of May 2011, our department now has the resources necessary to conduct clinical trials. Dr. Christopher Marrero and Jen Perilloux, our Certified Clinical Research Coordinator have worked hard to get clinical trials up and running. The department currently has approval for 3 clinical trials.

We greatly appreciate the help of Vinod Dasa, MD the Director of Orthopaedic Research, who has assisted and guided the residents throughout the year to help make research day a success. Quarterly meetings have been developed to help support the residents in their research endeavors. Our faculty has stepped up to the plate, and has fostered and mentored an increasing number of projects, with both the residents and medical students with an orthopaedic interest.

I am confident this trend will continue and develop as research is self perpetuating. Our signature will expand to be a practical. operative residency, with a solid research base. As a department, we will continue to strive to make research a major part of our residency program.



## **2013 Robert D. D' Ambrosia Guest Lecturer**

**Mark S. Vrahas, MD**

**Mark S. Vrahas, MD** is an internationally renowned trauma surgeon who specializes in complex hip, pelvic and acetabular procedures. He is currently the Chief of the Partners Orthopaedic Trauma Service and an Associate Professor at Harvard Medical School. He received his undergraduate degree in chemistry from Allegheny College, obtained his MD and completed his residency at the University of Pittsburgh before moving on to a Trauma Fellowship at the University of Toronto and a prestigious AO Foundation Traveling Fellowship in Europe.

During his 12 year tenure with Massachusetts General Hospital, Dr. Vrahas has grown and led a collaborative clinical and research program that is now internationally recognized for excellence. Two years ago, Dr. Vrahas initiated the Harvard Orthopaedic Trauma Research Program, which is a multi-disciplinary group of surgeons, scientists, and affiliated personnel who have a focused interest in trauma-related research. Members of this group have clinical appointments at MGH, Brigham & Women's Hospital, Beth Israel Deaconess Medical Center and Boston Children's Hospital. This group meets formally every month to review ongoing projects and develop new ones. The Harvard group has approximately forty studies currently active amongst its faculty.

Amongst the Partners' community, Dr. Vrahas has become increasingly active in departmental administrative leadership roles. For the last five years, he has served as the Chairman of the MGH Billing Oversight Committee and during the last two years he has served as the MGH Orthopaedic Department's representative to the Operating Room's Executive Committee and care redesign teams.

Dr. Vrahas spends a significant amount of time working with national and international orthopaedic groups and foundations like the AO Foundation. He currently serves as the Chairman of the AO Foundation's Clinical Investigation Division with which he is responsible for setting the Foundation's research priorities. Much of his career has been spent also as an educator with continuing education programs for community orthopaedists. In 2001, he established the New England Trauma Summit, which is a forum for regional surgeons to discuss cases with internationally-recognized experts. In addition to this particular course, he has served as the educational director for numerous local, national, and international trauma-related courses, classes, and symposia.

## 2013 Orthopaedic Surgery Graduate



### **Brandon P. Donnelly, MD**

Dr. Brandon Donnelly was born in Slidell, Louisiana on December 7, 1981. He is the son of Harold and Bobbie Donnelly. He attended Pope John Paul II High School where he was a graduate of distinction. Next, he studied at Cornell University in Ithaca, NY. He completed his degree in 2004 graduating Magna Cum Laude with a Bachelor of Arts in Biological Sciences.

After Cornell, Dr. Donnelly returned to Louisiana to begin Louisiana State University School of Medicine in New Orleans. Upon receiving his Doctorate of Medicine in 2008, he began his orthopaedic surgery residency also at LSU in New Orleans.

Brandon is currently one of four Chief Residents in the Department. Following graduation, he will begin a yearlong fellowship in orthopaedic hand surgery at The Philadelphia Hand Center, an affiliate of Thomas Jefferson University.

The topic for Dr. Donnelly's research is the "Relationship Between Visually Estimated Blood Loss and Change in Hemoglobin and Hematocrit in Total Knee Reconstruction."

Dr. Donnelly is married to Erin Baur Donnelly, and they are the proud parents of a son, Brandon Jr.

## **Relationship Between Visually Estimated Blood Loss and Change in Hemoglobin and Hematocrit in Total Knee Reconstruction**

**Brandon P. Donnelly, MD**

**Background:** Perioperative blood loss is commonly recorded for orthopedic surgical procedures. The most commonly used method of assessment is visually estimated blood loss. These observed blood loss measurements are often used perioperatively for patient management. These may also become a component of recorded outcomes used by government and insurance agencies. However, these methods are subjective, and can lead to inaccurate evaluations of blood loss. This may negatively affect patients by the inappropriate use of blood transfusions. In addition, these inexact records may reflect poorly on surgeon quality scores and subsequent success in practice. The purpose of this study was to determine if perioperative changes in hemoglobin and hematocrit correlated with intra-operative visually estimated blood loss during total knee arthroplasty.

**Methods:** A retrospective review of 138 patients, over a 4 year period (2007-2011), who underwent primary or revision total knee arthroplasty by a single surgeon. The perioperative change in hemoglobin (hb) and hematocrit (hct) were determined and compared to the recorded estimated blood loss. A statistical correlation was then performed to determine if estimated blood loss was accurately reflected by the change in laboratory measured hemodynamics.

**Results:** 138 patients, with an average age of 65 years (29-89) met our inclusion criteria including 51 males and 87 females. Average pre-op hb and hct were 13.4 g/dL and 39.7%, respectively. Post op average hb and hct were 12.3 g/dL and 36.3%, with an average pre to post-operative change of 1.1 g/dL and 3.4% respectively. Average blood loss was 135.5mL. No statistically significant correlation was noted between the changes in both hb and hct and the visually estimated blood loss.

**Conclusions:** The lack of correlation between perioperative changes in hemoglobin and hematocrit with visually estimated blood loss reinforce the inadequacy of this method of determining perioperative blood loss. Consequently, this speculative value should not be weighed heavily when determining post-operative patient care. In addition, one should caution in using these results when evaluating surgeon performance, or prognostic success.

**Level of Evidence:** Retrospective chart review- Level III

## 2013 Orthopaedic Surgery Graduate



### **Katy I. Morris, MD**

Dr. Katy Morris was born in Macon, Georgia on June 14, 1982. She is the daughter of Dr. Dale and Jeanie Morris. She graduated from St Mary's Dominican High School in New Orleans. Katy attended the University of Georgia in Athens, Georgia for her undergraduate education. She graduated Magna Cum Laude with a Bachelor of Science in Genetics.

In 2004, she received her medical degree from Louisiana State University Health Sciences Center in New Orleans. She continued her medical training at Louisiana State University in New Orleans with the Department of Orthopaedic Surgery.

Dr Morris is currently one of four chief residents in the Department of Orthopaedic Surgery. After graduation, she will begin the San Diego Arthroscopy and Sports Medicine Fellowship in La Jolla, California.

The topic for Dr. Morris's research is "Monosegmental Circumferential Fusion for Spondylolisthesis using a Combined Approach in Adolescents."

## **Monosegmental Circumferential Fusion for Spondylolisthesis using a Combined Approach in Adolescents**

**Katy I. Morris, MD**

**Background:** Traditional surgical treatment for moderate to severe grade spondylolisthesis in adolescents has included instrumentation and fusion from L4 to the sacrum. The L4/5 level is included to improve mechanics of reduction and fixation. The purpose of this study was to assess the efficacy of monosegmental circumferential fusion at L5/S1 only for spondylolisthesis using a combined approach in improving percent slip and slip angle, as well as generating a solid fusion.

**Methods:** A retrospective review of a consecutive series of eight patients with grade three or greater L5/S1 spondylolisthesis were treated by a single surgeon at a single institution between July 2003 and November 2008. Six female and two male patients were included with a mean age of 15 years and 10 months.

The procedure included a transperitoneal approach through a Pfannenstiel incision, a L5/S1 discectomy and interbody fusion utilizing a lordotic titanium cage and BMP2, and a posterior approach for placement of pedicle screws and iliac crest bone graft at L5/S1.

Throughout the follow-up period, patients were questioned about presence of pain, appearance concerns, and sexual dysfunction. Radiographic parameters reviewed included changes in percent slip, slip angle, pelvic incidence, and presence of fusion.

**Results:** At latest follow-up, all patients remained pain free. Solid fusion was evident by 6 months in all patients. Percent slip and slip angle improved in all patients (33-33%). Pelvic incidence was above normal in all patients before surgery, and showed no significant change postoperatively. There were no complications including those associated with the use of BMP2 (cage subsidence, retrograde ejaculation in males.)

**Conclusions:** Monosegmental circumferential fusion of the olisthetic level using a combined anterior-posterior approach using pedicle screws, a lordotic cage and bone graft/BMP2 is an effective treatment of spondylolisthesis in adolescents. Fusion of a healthy L4/L5 segment can be avoided.

**Level of Evidence:** Case Series-Level IV



## **2013 Orthopaedic Surgery Fellow**



### **Sushant Ghate, MD**

Dr Sushant Ghate was born in Pune, India on April 10, 1981. He is the son of Dattatraya Ghate and Sudha Ghate. He is married to Harshada Ghate. He attended medical school in Pune, India. He finished his medical school in 2004 from Pune with distinction. Dr. Ghate finished his orthopedic residency in 2009 from T N Medical College, Mumbai, India.

He is currently doing a fellowship in Pediatric Orthopaedics at Children's Hospital.

The topic for his research is 'Results of hemiepiphysiodesis for gradual guided correction of angular deformities around the knee in skeletally immature patients.'

## **Hemi-epiphysiodesis for Gradual Guided Correction of Anular Deformities at the Knee in Skeletally Immature Patients**

**Sushant Ghat, MD**

**Background:** Angular deformities around the joints are usually corrected to avoid abnormal joint forces across the joint. Hemi epiphysiodesis is the simple procedure which allows the growth of remaining physis to correct the deformity. The goal of our study was to review the cases of hemi epiphysiodesis done around the knee done at our hospital and to find out efficacy of these procedures for correction of deformity.

**Methods:** 42 patients (68 limbs) who underwent hemiepiphysiodesis with either staples or tension band plates were included in the study. Retrospective chart review was done through the charts of the patients having minimal follow up to 18 months. The parameters measured were mechanical axis (MA) ,mechanical Lateral distal femoral angle (mLDFA) , mechanical Medial proximal tibial angle (mMPTA) and mechanical axis deviation (MAD) using the standard long leg standing radiographs pre-operatively and at 3-6 months interval.

**Results:** Average age at the time of surgery was 10.1 (Range 4-16) years. Average follow up was 22.2 months. (Range 19-53). Out of 68 limbs, 30 had genu varum and 38 had genu valgus. Mean change in the mechanical axis for genu varum group was from -19 degrees to -6.6 degrees. Mean change in the group with genu valgum was from 10.2 degrees to 0.9 degrees. Mean rate of correction in mechanical axis was 9 degrees per year in valgus group and 12 degrees per year in varus group. 4 patients had failure to achieve significant correction of varus. 3 patients had broken screws.

**Conclusion:** Hemi-epiphysiodesis using tension band plate is the effective method of correcting angular deformities around the knee in skeletally immature patients with both genu varum and genu valgum. The regular follow up is required to avoid overcorrection of deformity. It is also effective in preventing progression of deformity in patients having abnormal physis such as blount's disease but may have higher chances of failure or complications in these patients.

**Level of Evidence:** Therapeutic-Level IV

## 2013 Orthopaedic Surgery Graduate



### **Blaine T. Walton, MD**

Dr. Blaine T. Walton was born in Lafayette, Louisiana on May 24, 1980 to Bonnie and Bobby Walton. He graduated from Notre Dame High School of Acadia Parish and received a Bachelors of Science in Biological and Agricultural Engineering from Louisiana State University in Baton Rouge. Blaine attended medical school at Louisiana State University Health Sciences Center in New Orleans graduating in 2008. He continued his residency training at LSUHSC in New Orleans in the Department of Orthopaedic Surgery.

Dr. Walton is currently one of four Chief Residents in the LSU Department of Orthopedic Surgery. After graduation, he will begin a one-year fellowship at the University of Alabama at Birmingham in Orthopaedic Traumatology. Upon completion of his fellowship he will return to south Louisiana and practice in Lafayette.

Dr. Walton is married to Sarah Walton and they are the proud parents of three girls: Ella, Marie, and Mae, and are expecting their fourth child in November.

## **A Cost Analysis of Internal Fixation Versus Nonoperative Treatment in Adult Midshaft Clavicle Fractures Using Multiple Randomized Controlled Trials**

**Blaine T. Walton, MD**

**Background:** Displaced, midshaft clavicle fractures in adults have been traditionally treated nonoperatively based on older data reporting low rates of nonunion. With more recent studies now showing superior functional outcomes with operative treatment, a trend toward initial surgical intervention is being seen. The cost of healthcare is under constant scrutiny and it is important for physicians to understand costs associated with our chosen interventions. We have sought to add to the existing data available by creating a unique economic analysis of the cost of operative versus nonoperative treatment from the perspective of a single payer. We hypothesize that the cost of nonoperative treatment, including those who require delayed operative treatment, will be less than those receiving initial operative management.

**Methods:** We identified four recent randomized controlled trials comparing operative and nonoperative treatment for displaced, midshaft clavicle fractures in adults with a minimum of one year follow up. A decision tree was then created from this data using reoperation for those treated with surgery or delayed operative treatment for those treated nonoperatively as endpoints. Actual costs estimated from 2013 Medicare reimbursement rates were applied and adjusted to better reflect private insurance rates. We then performed a 2-way sensitivity analysis to test the stability our model.

**Results:** Based on our decision tree, the expected costs for operative and nonoperative treatment were \$14,763.21 and \$3,112.65 respectively, producing a cost savings of \$11,650.56 with nonoperative treatment. After application of a 2-way sensitivity analysis, our model remains valid until delayed operative treatment for nonoperative patients approaches 95% and reoperation after initial operative management falls below 15%.

**Conclusions:** From the perspective of a single payer, initial nonoperative treatment of midshaft clavicle fractures followed by delayed surgery as needed is more cost effective than initial operative fixation.

**Level of Evidence:** Economic and decision analysis - Level I

## 2013 Orthopaedic Surgery Graduate



### Jeffrey B. Witty, MD

Dr. Jeffrey Witty was born in New Orleans, Louisiana on September 29, 1981. He graduated high school from Heritage Academy in Columbus, Mississippi. He then attended the Georgia Institute of Technology in Atlanta, Georgia where he graduated with honors earning a degree in Biology with a focus in Microbiology. After college, he moved back to Mississippi to attend the University of Mississippi School of Medicine and graduated in 2008. Afterwards, he followed in his father's footsteps to New Orleans for residency, although taking a slightly different career path to Orthopaedic Surgery. Upon graduation, he will be starting a sports medicine fellowship at the Mississippi Sports Medicine and Orthopaedic Center in Jackson, Mississippi. He will return to New Orleans for a portion of his training at the Tulane Institute of Sports Medicine with Dr. Savoie.

Dr. Witty is married to Christine Witty who has recently completed her PhD in Neuroscience from Tulane University. His mother and father both live in Columbus, Mississippi where they currently work in his father's OB/GYN practice. He is the oldest of three brothers, Patrick, 22, and Joseph, 28.

Dr. Witty's research presentation is titled "Fragility Fractures: Is LSU Using This Teachable Moment Effectively?"

## **Fragility Fractures: Is LSU Using this Teachable Moment Effectively?**

**Jeffrey B. Witty, MD**

**Background:** There is considerable morbidity associated with osteoporotic hip fractures. However, it is often the case that a minority of patients receive appropriate screening as well as treatment before and after sustaining the fracture. A program that identifies and treats patients can significantly reduce the rate of such fractures. The purpose of the present study was to identify patients treated for hip fracture within the LSUHN and those who had prior risk factors, who had received screening with DEXA, and those who were treated before and after the fracture.

**Methods:** The initial cohort of hip fracture patients were identified using ICD-9 codes from the LSU Healthcare Network database. These consisted of patients diagnosed and treated for osteoporotic hip fractures. Electronic medical records from the LSUHN and Ochsner Medical Center - Kenner were reviewed. Patient demographics including age, gender, BMI, injury date, associated fracture and subsequent fractures were identified. Risk factors and comorbidities as identified in the literature, the American Orthopaedic Association, and the National Osteoporosis Foundation were recorded. Any DEXA scan obtained and all treatments were also recorded

**Results:** A total of 95 patients were identified that met inclusion criteria. The majority of patients had a fall from standing (87%). Decreased patient mobility, a history of falls, and dementia were the most common risk factors (50%, 39%, and 33% respectively). The majority of patients did not receive DEXA scan as indicated at any point during their course (72.6%) and a small proportion received DEXA prefracture (17.9%) and postfracture (6.3%). Patients received a variety of treatments including calcium, vitamin D, calcium and vitamin D, and calcium, vitamin D and pharmacologic treatment such as a bisphosphonate (17%, 16%, 13.8%, 2.1%). These values did not substantially increase for treatment after the fracture occurred (22.7, 22.7, 19.3, 6.8%)

**Conclusions:** Patient workup and treatment before and after hip fracture is still not adequate. Despite multiple risk factors the number of patients receiving an indicated DEXA is still very low. The hip fracture event, which some authors consider a sentinel event, did not increase the number of patients who received a DEXA. The trend is the same for treatment. A significant minority of patients were receiving indicated treatment before hip fracture and this number did not appropriately increase after fracture occurred. Orthopaedic surgeons should take a more active role in the workup and treatment of osteoporosis to minimize the incidence of hip fractures and associated morbidity.

**Level of Evidence:** Diagnostic Study - Level III

# Department of Orthopaedic Surgery

## Faculty and Staff

### Pediatrics:

Andrew King, MD

- Professor & Chair

William Accousti, MD

- Associate Professor

Stephen Heinrich, MD

- Clinical Professor

Joseph Gonzales, MD

- Clinical Assistant Professor

Prerana Patel, MD

- Assistant Professor

Edward Southern, MD

- Associate Professor

### Adult Reconstruction:

Vinod Dasa, MD

- Associate Professor & Director of Research

William Sherman, MD

- Assistant Professor

### Trauma:

Peter Krause, MD

- Associate Professor & Program Director

Olivia Lee, MD

- Assistant Professor

### Sports Medicine:

Brent Bankston, MD

- Clinical Assistant Professor

Robert Dugas, MD

- Assistant Professor

Michael Hartman, MD

- Assistant Professor & Assistant Program Director

### Hand:

Harold Stokes, MD

- Professor

### Foot & Ankle:

Monroe Laborde, MD

- Clinical Assistant Professor

### Spine:

Paul Dimartino, MD

- Assistant Professor

### General Orthopaedics:

Christopher Marrero, MD

- Assistant Professor & Director of Clinical Trials

Ronnie Matthews, MD

- Clinical Assistant Professor

Keith Melancon, MD

- Assistant Professor

John Thomas, MD

- Clinical Assistant Professor

### Research:

Stephen Cook, PhD

- Professor

Jeffrey Gimble, MD, PhD

- Professor

Mandi Lopez, PhD

- Associate Professor

### Staff:

Jennifer Doughty-Administrative Assistant

Linda Flot-Coordinator of Academic Area

Edwina Jackson-Administrative Assistant

Sven Oertel-Business Manager

Jennifer Perilloux-Clinical Associate

Dana Stewart-Administrative Coordinator

# Orthopaedic Surgery Residents



## Grads:

Brandon Donnelly, MD  
Katy Morris, MD  
Blaine Walton, MD  
Jeffrey Witty, MD

## PGY-4s

James Kyle, MD  
Dale Landry, MD  
Russell Russo, MD  
Kristopher Sirmon, MD

## PGY-3s

Shaun Accardo, MD  
Jared Braud, MD  
Karim Meijer, MD  
Wame Waggenpack, MD

## PGY-2s

Ryan Bliss, MD  
Brian Perry, MD  
James Rose, MD  
John Whatley, MD

## PGY-1s

Amir Abdul-Jabbar, MD  
Bryce Fugarino, MD  
Lindsey Goodwin, MD  
Harry Molligan, MD

## Incoming

Matthew Delarosa, MD  
Rabun Fox, MD  
Mary George, MD  
Thomas Royals, MD



**WISHING YOU THE BEST OF LUCK!**



**DEPARTMENT OF ORTHOPAEDIC SURGERY  
2013 GRADUATES**