Modulation of the Acute Post-Anterior Cruciate Ligament Rupture Intra-Articular Environment via Recruitment of Marrow-Derived Stem Cells to Promote Bone Tunnel Healing in ACL Reconstruction

Kevin C. Baker
Beaumont Health

Samantha Hartner

Mackenzie M. Fleischer
Oakland University William Beaumont School of Medicine Medical Student

Michael D. Newton
Beaumont Health

William B. Acker
Beaumont Health

Follow this and additional works at: https://scholarlyworks.beaumont.org/orthopaedic_surgery_confabstract

Recommended Citation

This Conference Proceeding is brought to you for free and open access by the Orthopaedic Surgery at Beaumont Health Scholarly Works and Archives. It has been accepted for inclusion in Conference Presentation Abstracts by an authorized administrator of Beaumont Health Scholarly Works and Archives. For more information, please contact janet.zimmerman@beaumont.org.
Authors
Kevin C. Baker, Samantha Hartner, Mackenzie M. Fleischer, Michael D. Newton, William B. Acker, Perry Altman, Christopher Bush, Tristan Maerz, and Asheesh Bedi
Biomechanical Variability of Osteochondral Allograft Dowels

Evan Vellios, MD
Dean Wang, MD
Claire Lynch, BS
Tony Chen, PhD
Amanda Wach, MS
Scott A. Rodeo, MD, FAAOS
Suzanne A. Maher, PhD
Riley J. Williams, MD, FAAOS

OCA dowels harvested from female and/or older donors exhibit inferior shear mechanical properties making them prone to failure and pre-cut OCA dowels fail more often at the bone-cartilage interface.

Superior Pain Reduction with Anteromedialization Tibial Tubercle Osteotomy vs. Nonsurgical Management for Patellofemoral Osteoarthritis

Amit K. Manjunath, BS
Matthew Gotlin, MD
David A. Bloom, BA
Eoghan Hurley, MBCHB
Michael J. Alaia, MD, FAAOS
Laith M. Jazrawi, MD, FAAOS
Eric J. Strauss, MD, FAAOS

An unloading anteromedialization TTO provides significantly better pain relief and restoration of function compared to nonsurgical management in the treatment of symptomatic PFOA.

The Effect of Unstable Chondral Lesions on Patient Outcomes and Degenerative Joint Disease at 5 Years after Meniscectomy: The Chondral Lesions And Meniscal Procedures Randomized Controlled Trial

Leslie J. Bisson, MD, FAAOS
Melissa Kluczynski, MS
William Wind, MD, FAAOS
Marc S. Fineberg, MD, FAAOS
Geoffrey A. Bernas, MD, FAAOS
Michael A. Rauh, MD, FAAOS
John M. Marzo, MD, FAAOS
Zehua Zhou, MA
Jiwei Zhao

Patients undergoing APM without unstable chondral lesions had better outcomes than patients with unstable chondral lesions at 5 years after surgery.

Anterior Cruciate Ligament Deficiency Alters Tibiofemoral Cartilage Strain Response to Walking In-Vivo

Bryan Crook
Amber Collins, PhD
Nimit Lad, MD
Charles E. Spritzer, MD
Jocelyn R. Wittstein, MD, FAAOS
Louis E. DeFrates, PhD

ACL deficient tibiofemoral cartilage exhibits increased strain in response to treadmill walking, suggesting altered mechanical loading may contribute to the early degenerative cycle of osteoarthritis.

Concussions Occur at Practice and on Average Require a Month to Return-to-Sport – Epidemiology of Concussion Injuries in NCAA Division I Athletes: 17-Year Data from a Single Institution

Nicholas Debellis, MD
Alexander Weber, MD
Ioanna Bolia, MD, MSc
Russell Romano, ATC, MA
Reza Omid, MD, FAAOS
George F. Hatch, MD, FAAOS
Frank Petrigliano, MD, FAAOS
James E. Tibone, MD, FAAOS
Seth C. Gamradt, MD, FAAOS

Football was the sport with the highest number of concussion events. Water polo had the second highest number of concussion events followed by women’s volleyball.

Modulation of the Acute Post-Anterior Cruciate Ligament Rupture Intra-Articular Environment via Recruitment of Marrow-Derived Stem Cells to Promote Bone Tunnel Healing in ACL Reconstruction

Kevin C. Baker, PhD
Samantha Hartner, MS
Mackenzie M. Fleischer, MS
Michael D. Newton, MS
William B. Acker, MD
Perry Altman, MD
Christopher Bush, MD
Tristan Maerz, PhD
Asheesh Bedi, MD, FAAOS

Acute, post-injury peripheral blood mobilization therapy with a CXCR4 antagonist improved bone tunnel healing and graft integration following ACL reconstruction surgery in a rat model.

The FDA has not cleared the drug and/or medical device for the use described in this presentation (i.e. the drug or medical device is being discussed for an off label use). For full information refer to page 17.