Divison Details

Division Data Summary

**RESEARCH AND TRAINING DETAILS**

<table>
<thead>
<tr>
<th>Details</th>
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<tbody>
<tr>
<td>Number of Faculty</td>
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<tr>
<td>Number of Research Fellows</td>
<td>1</td>
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<tr>
<td>Number of Research Students</td>
<td>10</td>
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<tr>
<td>Number of Support Personnel</td>
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<tr>
<td>Direct Annual Grant Support</td>
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<td>Direct Annual Industry Support</td>
<td>$289,201</td>
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<tr>
<td>Peer Reviewed Publications</td>
<td>38</td>
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**CLINICAL ACTIVITIES AND TRAINING**

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<tr>
<td>Number of Clinical Staff</td>
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<tr>
<td>Number of Clinical Fellows</td>
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<tr>
<td>Inpatient Encounters</td>
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<td>Outpatient Encounters</td>
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**Significant Accomplishments**

**HemiBridge Spine Clip Advances in Clinical Trials**

The HemiBridge™ System has passed a Phase I clinical safety trial, with the device showing immediate post-operative decreases in curvature. Of the six individuals enrolled in the study, four patients have completed one-year follow-up visits, with early indications of positive performance results. In all six patients, spine deformities are either stable or improved. In one case, a curve correction of 70 percent occurred in one year, with indications of vertebral growth modification and disc height maintenance.

In the US, the FDA has approved a Humanitarian Use Device (HUD) designation for the HemiBridge System. The protocol for a Phase II trial also has been approved. In Europe, the device already has a CE Mark, giving it regulatory clearance to market. Four additional clinical trial sites, two each in England and Germany, have been prepared for a limited and strategic market release. Korean patents were approved.

Results of device effects on spine biomechanics in an in vitro model have been accepted for publication in the journal *Spine*. A second set of biomechanical tests is in analysis. Computational model growth modification results were presented at the Orthopaedic Research Society. Clinical safety trial results were presented at meetings of the Pediatric Orthopaedic Society of North America and the International Congress on Early Onset Scoliosis. An Instructional Course was presented at the American Academy of Orthopaedic Surgeons.

**PRECICE Device Revolutionizes Limb Lengthening Treatment**

The PRECICE ™ device is a remote-controlled, magnetic intramedullary nail that can lengthen leg bones.
without the need for an external device or fixator. This device is recommended for children whose legs have grown to be different lengths. James McCarthy, MD, is piloting this new FDA-approved device in a multi-center study to evaluate its safety and effectiveness in children. So far, the device has been successfully implanted in two patients.

Brachial Plexus Research Coming to Fruition

Roger Cornwall, MD, has received a three-year Career Development Grant from the Orthopaedic Research and Education Foundation (OREF) to pursue a study entitled “The Role of Muscle Satellite Cells in Contracture Formation Following Neonatal Brachial Plexus Injury.” Cornwall also received the J. Leonard Goldner Pioneer Research Award, which is given to the top research grant application submitted to the American Society for Surgery of the Hand. Cornwall’s study is entitled “Afferent Denervation and Contractures Following Neonatal Brachial Plexus Injury.”

Pediatric Sports Injuries on the Decline

Shital Parikh, MD, presented a study entitled “The Trend of Pediatric Sports and Recreational Injuries in the U.S. in the Last Decade” at the American Academy of Orthopaedic Surgeons Annual Meeting. Results also were highlighted on CNN.com and several local media outlets. The study found that, contrary to popular opinion, the number of sports injuries has decreased in the past decade. Parikh says the reduction could be caused by a decrease in physical activity among children along with the positive effects of preventive programs and continuing education about sports injury.

Division Publications


Faculty, Staff, and Trainees

Faculty Members

**James McCarthy, MD**, Professor
  **Leadership** Director, Pediatric Orthopaedic Surgery

**Steven Agabegi, MD**, Assistant Professor
  **Research Interests** Scoliosis natural history

**Donita Byliski-Austrow, PhD**, Associate Professor
  **Leadership** Director of Biomechanics Research
Research Interests  Spine Biomechanics
Sheila Chandran, MD, Assistant Professor

Roger Cornwall, MD, Assistant Professor
Leadership  Clinical Director; Co-Director, The Hand and Upper Extremity Center
Research Interests  Hand and Upper Extremity

Alvin Crawford, MD, Professor
Leadership  Co-Director, Spine Center and Fellowship Program
Research Interests  Scoliosis and Neurofibromatosis

Chitra Dahia, PhD, Instructor

Viral Jain, MD, Assistant Professor
Research Interests  Scoliosis

Kevin Little, MD, Assistant Professor
Research Interests  Hand and Upper Extremity

Charles Mehlman, DO, MPH, Associate Professor
Leadership  Director, Musculoskeletal Outcomes Research, Pediatric Orthopaedic Resident Education, Brachial Plexus and Co-Director of the Limb Reconstruction Center
Research Interests  Spine Bracing and Evidence-Based Medicine

Shital Parikh, MD, Assistant Professor
Research Interests  Sports Medicine

Jaime Rice-Denning, MD, Assistant Professor

Joel Sorger, MD, Assistant Professor
Research Interests  Musculoskeletal Oncology

Peter Sturm, MD, Professor
Leadership  Co-Director, The Crawford Spine Center; Director, Spine Fellowship Program

Junichi Tamai, MD, Assistant Professor
Leadership  Director, Physician Assistant Program
Research Interests  Process Improvement

Eric Wall, MD, Professor
Leadership  Director, Orthopaedic Research Program; Director, Sports Medicine Program; Director, Pediatric Orthopaedic Fellowship Program

Clinical Staff Members

Lance Bolin, PA-C
Lead Physician Assistant

Michael Hood, PA-C

Hillary McClung, PA-C

Hilliary McCourt, PA-C

Sarah Ogle, PA-C

Mary Pam Pfiester, PA-C
Stephanie Pinkstock, PA-C
Adriana Reinersman, PA-C

Trainees

David Abbasi, MD, PGY4, University of Cincinnati, Cincinnati, OH
Antulio Aroche, DO, PGY4, Ingham Regional Medical Center, Lansing, MI
Darren Barton, DO, PGY1, Wellmont Holsten Valley Medical Center, TN
Nicolas Bonnaig, MD, PGY4, University of Cincinnati, Cincinnati, OH
Kyle Boren, DO, PGY1, Wellmont Holsten Valley Medical Center, TN
Joseph Borruso, DO, PGY3, Millcreek Community Hospital, Erie, PA
William Browning, DO, PGY3, Millcreek Community Hospital, Erie, PA
Leroy Butler, DO, PGY1, Wellmont Holsten Valley Medical Center, TN
Imran Choudry, MD, PGY4, University of Cincinnati, Cincinnati, OH
Andrew Cordaile, DO, PGY4, Peninsula Hospital Center, Far Rockaway, NY
Geoffrey Cornelsen, DO, PGY3, Millcreek Community Hospital, Erie, PA
Matthew Elliott, DO, PGY3, Henry Ford Hospital Systems, Warren, MI
Brian Grawe, MD, PGY4, University of Cincinnati, Cincinnati, OH
Nina Gray, MD, PGY2, Bethesda North Family Practice, Cincinnati, OH
Kanwarpaul Grewal, DO, PGY4, Peninsula Hospital Center, Far Rockaway, NY
Jacob Gunzenhaeuser, MD, PGY2, University of Cincinnati, Cincinnati, OH
Ryan Heuter, MD, PGY2, Bethesda North Family Practice, Cincinnati, OH
Kory Johnson, DO, PGY3, Metro Health Hospital, Wyoming, MI
Namdar Kazemi, MD, PGY2, University of Cincinnati, Cincinnati, OH
Kyle LeGrand, DO, PGY2, Bethesda North Family Practice, Cincinnati, OH
Mark Lembach, MD, PGY4, University of Cincinnati, Cincinnati, OH
Daniel Lukes, DO, PGY3, Millcreek Community Hospital, Erie, PA
Antonio Manocchio, DO, PGY1, Grandview Medical Center, Dayton, OH
Melissa Martinek, MD, PGY4, University Hospitals, Richmond, OH
Molly McGraw, DO, PGY1, Grandview Medical Center, Dayton, OH
Andrew Millis, MD, PGY2, University of Cincinnati, Cincinnati, OH
Natasha Moore, DO, PGY2, Bethesda North Family Practice, Cincinnati, OH
Chris Moros, DO, PGY4, Peninsula Hospital Center, Far Rockaway, NY
Benjamin Newton, DO, PGY2, Bethesda North Family Practice, Cincinnati, OH
Marios-Nikolaos Lykissas, MD, PGY5, Residency University of Ioannina, Ioannina, Greece
Joel Post, DO, PGY4, Ingham Regional Medical Center, Lansing, MI
Chris Rierson, DO, PGY4, Ingham Regional Medical Center, Lansing, MI
Craig Roberto, DO, PGY4, Peninsula Hospital Center, Far Rockaway, NY
Warren Rogers, DO, PGY4, Millcreek Community Hospital, Erie, PA
Senthil Nathan Sambandam, MBBS, MS, MD, PGY7, Fellowship, Trauma, University of Louisville, Louisville, KY
Katherine Schroeder, MD, PGY2, University of Cincinnati, Cincinnati, OH
Sergey Sheleg, MD, PGY2, Bethesda North Family Practice, Cincinnati, OH
Ashley Simela, DO, PGY4, University Hospitals, Richmond, OH
Kyle Stephens, DO, PGY3, Henry Ford Hospital Systems, Warren, MI
Benjamin Szerlip, DO, PGY3, University Hospitals, Richmond, OH
### Grants, Contracts, and Industry Agreements

#### Grant and Contract Awards

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<th>End Date</th>
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<td>Genetic Evaluation for the Scoliosis Gene(s) in Patients</td>
<td>Department of Defense Army (University of Minnesota)</td>
<td>W81XWH-10-1-0469</td>
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<td>DAHIA, C</td>
<td>Control of Intervertebral Disc Growth and Development</td>
<td>Orthopaedic Research and Education Foundation</td>
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<td>07/01/11</td>
<td>06/30/14</td>
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<td>MEHLMAN, C</td>
<td>Bracing in Adolescent Idiopathic Scoliosis</td>
<td>National Institutes of Health (University of Iowa)</td>
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<td>09/01/12</td>
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<td>STURM, P</td>
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#### Industry Contracts

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<td>MCCARTHY, J</td>
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<td>Ellipse Technologies, Inc</td>
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<td>WALL, E</td>
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<td>SpineForm, LLC</td>
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#### Current Year Direct Receipts

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#### Total

| Total | $394,310 |