

**CURRICULUM VITAE**  
**Mark J. R. Moulton, M.D.**

OFFICE: Orthopaedic Associates of Muskegon  
1400 Mercy Drive, Suite 100  
Muskegon, MI 49444  
Telephone: 231.733.1326  
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*Joined Orthopaedic Associates of Muskegon in June 2000*

SPECIALTY: Orthopaedic Surgery, Spine

EDUCATION: North Muskegon High School, North Muskegon, MI, September, 1978-  
June, 1982  
  
Adrian College, Adrian, Michigan – B.S. degree, August, 1982-June,  
1986  
  
Wayne State University, Detroit, MI – M.S. degree, June, 1986-June,  
1987  
  
Georgetown University School of Medicine, Washington, DC – M.D.  
degree, September, 1987-June, 1992

PROFESSIONAL  
TRAINING: *Internship:*  
Georgetown University Medical Center, Washington, DC, General  
Surgery, 1992-1993  
  
*Residency:*  
The Milton S. Hershey Medical Center, Hershey, PA, Orthopaedic  
Surgery, 1993-1999  
  
*Fellowships:*  
Rumble Research Fellowship, Department of Radiation Oncology,  
Division of Tumor Biology, Wayne State University, Detroit, MI, 1986-  
1988  
  
NIH/Georgetown University Research Fellowship, National Institute of  
Allergy and Infectious Disease, Bethesda, MD, 1988-1989

Michael and Myrtle Baker Orthopaedic Research Fellowship, Penn State College of Medicine, The Milton S. Hershey Medical Center, Department of Orthopaedics, Hershey, PA, 1993-1995

Thomas Jefferson University Spinal Surgery Fellowship, Rothman Institute, Philadelphia, PA, 1999-2000

**PROFESSIONAL/  
SCHOLASTIC  
ORGANIZATIONS:**

Sigma Xi, 1986  
American Medical Student Association, 1988  
American Medical Association, 1992  
Pennsylvania Orthopaedic Society, 1997  
North American Spine Society, 2000  
Michigan State Medical Society, 2001  
Muskegon County Medical Society, 2001  
Michigan Orthopaedic Society, 2001  
American Academy of Orthopaedic Surgery, 2001  
American Spinal Injury Association, 2012

**ACTIVITIES AND  
ORGANIZATIONS:**

Georgetown University Medical School  
Curriculum Committee, 1989-1990  
Financial Aide Committee, 1989-1992  
Financial Aide Committee – Chairman, 1990-1991  
Admissions Committee, 1992-1993

Georgetown University Medical Center  
Executive Committee for Education, 1990-1992

**HONORS AND  
AWARDS:**

Adrian College, Departmental Award for Excellence, 1986

Wayne State University, Rumble Fellowship Research Award, 1986-1987

Georgetown University School of Medicine, Georgetown University Medical School Research Award, 1988

The Milton S. Hershey Medical Center, The Pennsylvania Orthopaedic Society 2<sup>nd</sup> Place Resident Presentation, 1995

Orthopaedic Trauma Association Edwin G. Bovill Award (Co-Authored), 1996

Eastern Orthopaedic Society Founder's Award (Co-Authored), 1997

American Orthopaedic Association Frank Stinchfield Award, (Co-Authored), 1998

AOA-Zimmer Award (Co-Authored), 1998

AOA-Zimmer Award (Co-Authored), 2000

EXAMINATIONS: Georgetown University School of Medicine, September, 1987-June, 1992  
 NBME I 460  
 NBME II 202

LICENSURE: *Certifications:*  
 Advanced Cardiac Life Support, 1997  
 Advanced Trauma Life Support, 1997

*Licenses:*  
 Surgical Internship License, Virginia, 1992  
 Medical Training License, Pennsylvania, 1993  
 License to Practice Medicine, Pennsylvania, 1997  
 License to Practice Medicine, Michigan, 2000

BOARD CERTIFICATION: Board-certified Orthopaedic Surgeon, American Board of Orthopaedic Surgery, September 2002

HOSPITAL PRIVILEGES: Mercy General Health Partners, Muskegon, MI, 2000 to present  
 Hackley Hospital, Muskegon, MI, 2000 to present

APPOINTMENTS: Vice Chief of Surgery, Mercy General Health Partners, Muskegon, MI 2004 to present

PUBLICATIONS: Moulton, M. and Cotler, J. Application of Halo Traction. Spine  
 Book Chapters: Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M. and Cotler, J. Open Reduction Techniques for Unilateral and Bilateral Facet Dislocations of the Cervical Spine. Spine Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M. and Vaccaro, A. Lateral Mass Screw Placement. Spine Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M. and Vaccaro, A. Cervical Pedicle Screw Placement. Spine Surgery: Tricks of the Trade. Theime Publishing.

Moulton, M., Vaccaro, A. and Cotler, J. Posterior Cervical Approach: Decompression – Open Reduction of Unilateral and Bilateral Facet Dislocations. Spine Surgery: Tricks of the Trade, Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Posterior Cervical Approach: Arthrodesis/Instrumentation. Anterior Bone Graft Placement in the Cervical Spine. Spine Surgery: Tricks of the Trade. Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Posterior Cervical Approach: Arthrodesis/Instrumentation. Cervical Pedicle Screw Placement. Spine Surgery: Tricks of the Trade. Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Posterior Cervical Approach: Arthrodesis/Instrumentation. Cervical Lateral Mass Screw Placement (C3-C7). Spine Surgery: Tricks of the Trade. Theime Publishing, London, England, 2001.

Moulton, M. and Vaccaro, A. Anterior Cervical Approach: Decompression. Application of Halo Orthosis. Spine Surgery: Tricks of the Trade, Theime Publishing, London, England, 2001.

#### ABSTRACTS:

Shaw, J. and Moulton, M. Proximal Tibial Osteotomy: An Operation Based on a Bogus Mechanical Concept. The Knee Society, Baltimore, MD, October 6, 1994.

Vrahas, M. and Moulton, M. The Accuracy of Iliac and Obturator Views for the Predication of Articular Cartilage Incongruity in Both Column Acetabular Fractures. Acetabular Trauma Update, Pittsburgh, PA, November 1994.

Reid, S., VanSlyke, M., Moulton, M and Mann, T. Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration. Pennsylvania Orthopaedic Society, Philadelphia, PA, November 1994.

Moulton, M., Wilson, S., Paul, E. and Allen, L. Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues: A Controlled Human Trial. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

Wilson, S., Moulton, M., Paul, E. and Allen, L. Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues. Orthopaedic Research Society Meeting, Orlando, FL, February 1995.

Stube, K., Black, K. and Moulton, M. The Effects of Interference Screw Length on Distal Fixation for Anterior Cruciate Ligament Reconstruction. 62<sup>nd</sup> Annual Meeting of the American Academy of

Orthopaedic Surgeons, Orlando, FL, February 1995.

Reid, J., VanSlyke, M., Moulton, M. and Mann, T. Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

Wilson, S., Moulton, M. and Shaw, J. The Effect of Cast Splitting on Relieving Compartment Pressures in the Lower Extremity. 28<sup>th</sup> American Orthopaedic Association's Annual Residents' Conference, Pittsburgh, PA, March 29 – April 1, 1995.

Moulton, M. and Reid, J. Proximal Tibial Safe Zones for the Placement of Transfixion Wires with Respect to Prevention of the Intracapsular Penetration. 28<sup>th</sup> American Orthopaedic Association's Annual Residents' Conference, Pittsburgh, PA, March 29-April 1, 1995.

Wall, T., Moulton, M. and Boal, D. The Use of Ultrasound in Diagnosing Ulnar Collateral Ligament Injuries of the Metacarpophalangeal (MP) Joint of the Thumb. 28<sup>th</sup> American Orthopaedic Association's Annual Residents' Conference, Pittsburgh, PA, March 29-April, 1995.

Stube, K., Black, K. and Moulton, M. Shorter Interference Fit Screws During ACL Reconstruction. 1995 AOSSM Annual Meeting, London, Ontario, Canada, July 16-19, 1995.

Bixler, B., Naidu, S., Capo, J. and Moulton, M. Percutaneous Pin Fixation of Proximal Humerus Fractures: A Biomechanical Study. 63<sup>rd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

Moulton, M., Schneider, D., Kranitzky, G. and Pelligrini, V. The Effects of Femoral Reaming and Gluteal Myonecrosis on Heterotopic Ossification. 65<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, LA, February 1998.

Segal, L., Schneider, D., Moulton, M. and Schwentker, E. Injury to the Capital Femoral Epiphysis in Growing Rabbits: An Animal Model for the Protective Role of the Ossific Nucleus in DDH. 65<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, New Orleans, LA, February 1998.

- MANUSCRIPTS: Reid, J., VanSlyke, M., Moulton, M. and Mann, T. Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration. Submitted to JBJS.
- Shaw, J. and Moulton, M. High Tibial Osteotomy: An Operation Based on a Spurious Mechanical Concept, A Theoretical Threatise. American Journal of Orthopaedics, Volume 25 (6), June 1996.
- Naidu, S., Bixler, B. and Moulton, M. Radiation Induced Physical Changes in Ultra High Molecular Weight Polyethylene (UHMWPE) Implant Components. Orthopaedics, Vol. 20 (2), February 1997.
- Naidu, S., Cuckler, J., Ducheyne, P. and Moulton, M. Orderly Oriented Wire Mesh: A Novel Porous Coating. Orthopaedics, Vol. 20 (5), May 1997.
- Naidu, S., Capo, J., Moulton, M., Ciccone, W. and Radin, A. Percutaneous Pinning of Distal Radius Fractures: A Biomechanical Study. Journal of Hand Surgery, Vol. 22A (2), March 1997.
- Stube, K., Black, K. and Moulton, M. The Effects of Interference Screw Length on Tibial Tunnel Fixation for Anterior Cruciate Ligament Reconstruction. Submitted to the American Journal of Sports Medicine.
- Naidu, S., Bixler, B., Capo, J. and Moulton, M. Biomechanical Evaluation of Proximal Humerous Pinning Techniques. Orthopaedics, Vol. 20 (11), November 1997.
- Schneider, D., Moulton, M., Singapuri, K., Chinchilli, V., Deol, G. and Pelligrini, V. Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model. Clinical Orthopaedics and Related Research, Vol. 355, October 1998.
- Segal, L., Berlin, J., Schnieder, D., Moulton, M. and Frauenhoffer, E. Chondronecrosis of the Hip. The Protective Role of the Ossific Nulceus in an Animal Model. Submitted for publication to Journal of Pediatric Orthopaedics.
- NON-PEER  
REVIEWED  
PUBLICATIONS: Moulton, M., Nachwalter, R., Hilibrand, T., Vaccaro, A. and Albert, T. Management of Cervical Kyphosis in Patients with Ankylosing Spondylitis. Orthopaedic Tech. Review, May 2000.
- PRESENTATIONS: "Iontophoresis of Dexamenthasone into Skin and Subcutaneous Tissues: A Controlled Human Trail". Moulton, M., Wilson, S., Paul, E. and Allen, L. 62<sup>nd</sup> Annual Meeting of the American Academy of

Orthopaedic Surgeons, Orlando, FL, February 1995.

Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues”. Wilson, S., Moulton, M., Paul, E. and Allen, L. Orthopaedic Research Society Meeting, Orlando, FL, February 1995.

“Comparison of Techniques for Evaluating the Postoperative Reductions of Acetabular Fractures”. Vrahas, M., Bixler, B., Freudigman, P., Hospodar, P., Johnson, E. and Moulton, M. Orthopaedic Trauma Association, Los Angeles, CA, September 22-25, 1994.

“The Effects of Interference Screw Length on Distal Fixation for Anterior Cruciate Ligament Reconstruction”. Stube, K., Black, K. and Moulton M. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Orthopaedic MRI Beyond Basic Spin Echo”. Parris, W., VanSlyke, M. and Moulton, M. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“The Relationship of Upper Extremity Compressive Dressings to Forearm Compartment Pressures and Effect of Univalve and Bivalve Release”. Capo, J., Moulton, M. and Reid, J. 63<sup>rd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

“The Influence of Metacarpophalangeal Joint Position on Thumb Basal Joint Loading”. Moulton, M., Parentis, M., Kelley, M. and Pellegrini, V. The American Orthopaedic Association’s 30<sup>th</sup> Annual Residents’ Meeting, New York, NY, March 1997.

“Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model”. Moulton, M., Schneider, D., Deol, G. and Pellegrini, V. The American Orthopaedic Association’s 31<sup>st</sup> Annual Residents’ Meeting, Sacramento, CA, February 20-22, 1998.

#### NATIONAL PRESENTATIONS:

“Iontophoresis of Dexamethasone into Skin and Subcutaneous Tissues: A Controlled Human Trail”. Moulton, M. and Wilson, S. American College of Surgeons, Central Pennsylvania Chapter Annual Meeting, Harrisburg, PA, March 1994.

“Proximal Tibial Osteotomy: An Operation Based on a Bogus Mechanical Concept”. Shaw, J. and Moulton, M. The Knee Society, Baltimore, MD, October 6, 1994.

“Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration: Trauma Update”. Pennsylvania Orthopaedic Society Annual Meeting, Pittsburgh, PA, November 16-19, 1994.

“The Effects of Interference Screw Length on Distal Fixation for Anterior Cruciate Ligament Reconstruction”. Stube, K., Black, K. and Moulton, M. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Safe Placement of Proximal Tibial Transfixion Wires with Respect to Intracapsular Penetration”. Reid, J., Moulton M. and Wall, T. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Proximal Tibial Osteotomy: An Operation Based on a Bogus Mechanical Concept”. Shaw, J. and Moulton, M. 62<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Orlando, FL, February 1995.

“Percutaneous Pin Fixation of Proximal Humerus Fractures”. Naidu, S., Bixler, B., Capo, J. and Moulton, M. 63<sup>rd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

“Percutaneous Pin Fixation of Proximal Humerus Fractures: A Biomechanical Study”. Bixler, B., Naidu, S., Capo, J. and Moulton, M. 63<sup>rd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Atlanta, GA, February 1996.

“The Influence of Metacarpophalangeal Joint Position on Thumb Basal Joint Loading”. Moulton, M., Kelly, M., Parentis, M. and Pelligrini, B. 51<sup>st</sup> Annual Meeting of the American Society for Surgery of the Hand, Nashville, TN, October 1996.

“Percutaneous Pin Fixation of Unstable Extra-Articular Distal Radius Fractures: A Biomechanical Study”. Naidu, S., Capo, J., Ciccone, W. and Moulton, M. 64<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, San Francisco, CA, February 1997.

“Effects of Interference Screw Length on Distal Fixation for ACL Reconstruction”. Moulton, M., Stube, K. and Black, K. The American Orthopaedic Association’s 30<sup>th</sup> Annual Residents’ Meeting, New York, NY, March 1997.

“Biomechanical Effects of the Ossific Nucleus on the Femoral



Epiphysis". Segal, L., Schneider, D., Moulton, M. and Schwentker, E. Pediatric Orthopaedic Society of North America, Vancouver, Canada, May 13-18, 1997.

"The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model". Schneider, D., Moulton, M., Deol, G. and Pellegrini, V. 31<sup>st</sup> Annual Meeting of the American Orthopaedic Association Residents' Conference, February 20-22, 1998.

"Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model". Moulton, M., Schneider, D., Deol, G. and Pellegrini, V. 65<sup>th</sup> Annual Meeting of the Academy of Orthopaedic Surgeons, Specialty Day/Hip Society, New Orleans, LA, March 19-23, 1998.

"Inhibition of Heterotopic Ossification with Radiation Therapy in an Animal Model". Moulton, M., Schneider, D., Deol, G. and Pellegrini, V. The American Orthopaedic Association, Asheville, NC, June 6, 1998.

"The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model". Deol, G., Schneider, D., Moulton, M., Singapuri, K., Chinchilli, V. and Pellegrini, V. 66<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Anaheim, CA, February 5, 1999.

"Injury to the Capital Femoral Epiphysis in Growing Rabbits: An Animal Model for the Protective Role of the Ossific Nucleus in DDH". Segal, L., Berlin, J., Schneider, D., Moulton, M. and Frauenthoffer, E. 66<sup>th</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, Anaheim, CA, February 5, 1999.

"Management of Cervical Trauma, Posterior Approach". AO/ASIF Clinical Instructor, Philadelphia, PA, February 2000.

"Presentation at the 12<sup>th</sup> Annual Thomas Jefferson Spine Fellows Alumni Symposium, Newport, RI, July 10-21, 2012.

#### REGIONAL PRESENTATIONS:

"The Effects of Metacarpophalangeal Joint Position on the Contact Forces Across the Trapeziometacarpal Joint". Moulton, M., Kelly, M., Parentis, M. and Pellegrini, V. The Annual Meeting of the Pennsylvania Orthopaedic Society, Philadelphia, PA, November 1995.

#### LOCAL PRESENTATIONS:

"Adenocarcinoma, Unknown Primary with Distant Metastasis". Moulton, M. and Crawford, M. Mercy General Health Partners Tumor Board, Muskegon, MI, November 6, 2001.

RESEARCH  
GRANTS:

The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model. Moulton, M. and Pellegrini, V. Orthopaedic Research and Education Foundation, \$97,000, July 1, 1995-June 31, 1997.

The Effects of Perioperative Radiation on the Inhibition of Heterotopic Ossification in Rabbits: An Animal Model. Moulton, M., Paul, E. and Pelligrini, V. Orthopaedic Research Initiation Grant (Institutional Seed Grant) Accepted Award \$12,500, August 1, 1993-July 1, 1994.

The Trapeziometacarpal Joint as an In Vivo Model for Primary Idiopathic Osteoarthritis: The Association of Estrogen Receptors with Attrition of the Palmar Beak Ligament. Pellgegrini, V. and Moulton, M. The American Society for Surgery of the Hand, Seed Grant \$7,500.

The Protective Influence of the Ossific Nucleus: An Animal and Biomechanical Model. Segal, L., Moulton, M., VanSlyke, M., Bruno, A. and Jacobs, C. Children's Miracle Network, \$9,736.

FACULTY:

Synthes Spine Advanced Cervical Solutions with ProDisc-C Forum, Orthopaedic Learning Center, Rosemont, IL, November 9, 2008.

TRAINING  
INTERNS/  
RESIDENTS IN  
ORTHOPAEDICS:

Mercy General Health Partners training program, Muskegon, MI, 6 weeks total training time from July 2001 to June 2002.