

MICHAEL E. JOYCE M.D.

- CURRICULUM VITAE -

- ORTHOPAEDIC SPORTS SPECIALISTS, P.C. (12/04-Pres.)
Orthopaedic Surgery & Sports Medicine- Private Practice
84 Glastonbury Blvd., Suite 101, Glastonbury, CT 06033
- CONNECTICUT SPORTS MEDICINE & ORTHOPAEDIC CENTER (8/95 – 12/04)
Orthopaedic Surgery & Sports Medicine - Private Practice
150 Mansfield Ave. Willimantic, CT 06226
- UNIVERSITY OF CONNECTICUT SCHOOL OF MEDICINE (12/95 - Pres)
Adjunct Assistant Clinical Professor, Department of Orthopaedic Surgery
Adjunct Assistant Clinical Professor, School of Allied Health

POSTGRADUATE EDUCATION:

- AMERICAN SPORTS MEDICINE INSTITUTE (8/94 - 8/95)
Fellowship in Sports Medicine and Arthroscopic Surgery
Dr. James Andrews & Dr. William Clancy
Birmingham, Alabama
- BARNES HOSPITAL, St. Louis, Missouri (6/90 - 6/94)
Washington University School Of Medicine
Department Of Orthopedic Surgery
Residency in Orthopaedic Surgery
- NATIONAL INSTITUTES OF HEALTH, N.I.A.M.S. (7/88 - 6/90)
Orthopaedic Research Unit
Intramural Research Fellow - Orthopaedics
- BARNES HOSPITAL, St. Louis, Missouri (6/87 - 6/88)
Washington University School Of Medicine
Internship in General Surgery,

MEDICAL EDUCATION:

- WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, St. Louis, MO (7/83 - 5/87)
Degree: M.D., June 1987

UNDERGRADUATE EDUCATION:

- MIAMI UNIVERSITY, Oxford, Ohio (7/78 - 12/81)
Degree: B.A. in Arts and Science, December 1981
Major: Chemistry, Minor: Zoology

CONSULTING – MEDICAL AND SCIENTIFIC

GENETICS INSTITUTE INC., Cambridge, Mass. Visiting Scientist, 1995 - 2001

Co-investigator studying the application of genetically engineered proteins on tendon, ligament and bone healing. Worked with Vicki Rosen, PhD and Scott Rodeo, MD on the development of surgical, *in vivo* animal models (small & large animals, non-human primates) that utilized BMP-12 to enhance bone to tendon healing.

EMPLOYMENT EXPERIENCE:

AMGEN INC., Thousand Oaks, California (2/82 - 7/83)

Research Associate - Molecular Biology: Developed and executed experiments dealing with gene cloning and expression, assay development, and the application of these technologies to project goals. I was responsible for my own experimental design and the development and improvement in experimental techniques.

MEDICAL LICENSE & BOARD CERTIFICATION:

American Board of Orthopaedic Surgery (since 1997)
STATE OF CONNECTICUT (since 1995)
STATE OF ALABAMA - 18025 (1994-2004)
STATE OF MARYLAND - d37145 (expired - 9/30/92)

PROFESSIONAL ORGANIZATIONS

American Medical Association, 1983-2005
Hartford County Medical Society – 2004-Pres.
Windham County Medical Society – 1996 - 2005
Connecticut State Medical Society - Since 1996
American Association for Bone and Mineral Research, Since 1989
American Federation for Clinical Research, Regular Member 1990 - 1996
Wound Healing Society, 1990 - 1994
American Association for the Advancement of Science – 1992 - 1997
Orthopaedic Research Society - Since 1991
American Academy of Orthopaedic Surgery -Since 1998
American Orthopaedic Association, Since 2007
Executive council, Orthopaedic Section, Connecticut State Medical Society, 1997 – Pres.
Sports Section of Connecticut State Medical Society, 2000 – Pres.

Honors: *Miami University Alumni Merit Scholarship; *Mortor Board; *Joy Manufacturing Scholastic Scholarship.

Athletics: U.S.A. National Swimming Team – 1976

ACADEMIC APPOINTMENTS:

University of Connecticut, School of Medicine & St. Francis Hospital
Primary Care Physician – Sports Medicine Fellowship Program 2001 – Pres.
University of Connecticut, School of Medicine
Department of Orthopaedic Surgery – Residency Program 2004 – Pres.

SCIENTIFIC APPOINTMENTS:

National Institutes of Health; Washington DC, December, 1993
Ad Hoc Study Section Member - Special Review Committee (RFA-HD-93-011)
"Biomaterials to Restore Function in People with Physical Disabilities"
Zymogenetics Inc., Seattle, WA
Scientific Advisory Board, 1991 - 1996.
Institutional Review Board - NCRC, 1989 - 1990
Conference referee for The New York Academy of Sciences, 1989
Reviewer - Journal of Orthopaedic Research, 1994-Present
Reviewer - Ad Hoc - Journal of Bone and Mineral Research, 1996
Reviewer - Ad Hoc - Clinical Therapeutics, 1996
Reviewer - Ad Hoc - Current Therapeutic Research, 1996

SCIENTIFIC AWARDS:

1989 - International Conferences on Calcium Regulating Hormones Travel Award
1990 - AOA-Zimmer Orthopaedic Residents Research Award
1990 - Henry Christian Award for Excellence in Research from the American Federation
for Clinical Research
1993 - Spinal Research Award - North American Spine Society
1994 - GICD-USA, The 1994 Spinal Surgery Paper Award
1996 - 3M - American Orthopaedic Society for Sports Medicine, Research Award

ATHLETIC TEAM PHYSICIAN:

University of Connecticut (Div. I), Co-Team Orthopaedic Surgeon, 1996 - Pres.
Minnesota Twins AA Baseball - New Britain, Rock Cats Team Physician, 1996 - Pres.
Connecticut Sun WNBA professional women's basketball – Head team Physician, 2003 – 2005
Davis Cup ATP Professional Tennis, Site Physician, 2004
Professional Boxing, Ringside Physician 2000 – Pres.
The Olympic Games - Soccer Team Physician, Atlanta GA, 1996
NHL – Approved 2nd opinion Orthopaedic Surgeon
Eastern Connecticut State University, Team Physician, 1995 to 2004
High School Team Physician – Windham HS, Bacon Academy HS, RHAM HS,
EO Smith HS, Coventry HS, Lyman Memorial HS, 1996 – Pres.
Birmingham Barons, Chicago White Sox - AA Baseball (Assistant) '94 - '95
Birmingham Bulls, Professional minor league Hockey (Assistant) '94 - '95
Troy State University (Div. I-AA) Team Physician, '94 - '95
Auburn University, assistant team physician, '94 – '95

GRANT SUPPORT:

1. Funded:

Funding Agency: Shriners Hospitals for Crippled Children
Period: Jan. 1992 to Dec. 1994
Grant Title: Growth Factor Regulation of Flexor Tendon Repair
Grant Number: GB# 13301
Principal Investigator: **Michael Joyce, MD**
Co-Investigators: Paul R. Manske, MD
Total Direct Costs: \$ 367,292

2. Funded:

Funding Agency: Zymogenetics Inc.
Period: Nov. 1992 to Dec. 1993
Grant Title: Platelet-Derived Growth Factor Regulation of
Intramembranous Ossification during
Distraction Osteogenesis
Principal Investigator: **Michael Joyce, MD**
Co-Investigators: Gary Miller, MD & Richard Pearson, MD
Total Direct Costs: \$ 20,000

3. Funded:

Funding Agency: North American Spine Society
Period: Oct. 1993 - Oct. 1994
Grant Title: Role of Transforming Growth Factor-beta in the Spinal Cord
Response to Acute Spinal Trauma
Principal Investigator: **Michael Joyce, MD**
Co-Investigators: Michael O'Brian, MD, Lawrence Lenke MD,
Keith Bridwell, MD
Total Direct Costs: \$ 12,500

4. Funded:

Funding Agency: Shriners Hospitals for Crippled Children
Period: Jan. 1995 to Dec. 1997
Grant Title: Growth Factor Regulation of Flexor Tendon Repair
Grant Number: GB# 13301
Principal Investigator: Paul Manske, MD
Consultant: **Michael Joyce, MD**
Total Direct Costs: \$ 450,000

5. Funded:

Funding Agency: Genetics Institutes, Inc
Period: July 1997 to July 1998
Grant Title: BMP-12 augmentation of bone to tendon repair
Principal Investigator: **Michael Joyce, MD**
Total Direct Costs: \$ 150,000

PUBLICATIONS:

- 1) Kreimer WJ, Ratamess NA, **Joyce ME**, et. al. "The Effects of a Cetylated Fatty Acid Topical Cream on functional Mobility and Quality of Life of Patients with Osteoarthritis" J. of Rheumatology, 2004 Apr; 31(4): 767-74
- 2) Kraemer WJ, Ratamess NA, **Joyce ME**, et. Al. :Effects of treatment with a cetylated fatty acid topicalcream on static postural stability and plantar pressure distribution in patients with knee osteoarthritisl J Strength Cond Res. 2005 Feb; 19(1): 115-21
- 3) Kraemer WJ. Ratamess NA, **Joyce ME** et al.: A acetylated fatty acid topical cream with menthol reduces pain and improves functional performance in individuals with arthritis. J Strength Cond Res 2005 May; 19(2): 475-80
- 4) Ilich, Jasminka, Zito M, Brownbill R, **Joyce M**; "Changes in Bone Mass after Colles' Fracture: A Case Report on Unique Data Collection and Long-term Implications," J. of Clinical Densitometry., 2001.
- 5) Lou J, Manske PR, Mitsuhiro A, **Joyce ME**; "Adenovirus-Mediated Gene Transfer into Tendon and Tendon Sheath," J. of Ortho Res., 14(4):513-517, April, 1996.
- 6) **Joyce ME**, Jelsma R, Andrews J,. "Throwing Injuries to the Elbow," in Sports Medicine and Arthroscopy Review. K. DeHaven and D. Cannon, Eds. 3(3), Sept. 1995, 224-236.
- 7) Jingushi S, Scully SP, **Joyce ME**, Sugioka Y, Bolander ME, "Transforming Growth Factor beta1 and Fibroblast Growth Factors in Rat Growth Plate,". J. of Ortho. Res., 13(5), Sept. 1995, 761 - 768.
- 8) **Joyce ME**, O'Brian MF, Lenke LG, Lou J, Bridwell KH, "Characterization of Cellular and Molecular Events in Acute Spinal Cord Injury" 1994, Spinal Frontiers.
- 9) O'Brian MF, Lenke LG, Lou J Bridwell KH, **Joyce ME**, "Astrocyte Response and Transforming Growth Factor- β Localization in Acute Spinal Cord Injury" 1994, Spine.
- 10) Jingushi S, **Joyce ME**, Bolander ME: Gene expression for extracellular matrix proteins correlates with histologic changes during fracture repair. J. of Bone and Min. Res., 7(9), Sept. 1992, 1045 - 1055
- 11) **Joyce ME**, Jingushi S, Scully SP, Bolander ME; Role of growth factors in fracture healing, In: Clinical and Experimental Approaches to Dermal and Epidermal Repair: Normal and Chonic Wounds, ed: A Barbul, Alan R. Liss Inc., New York, NY, Prog. Clin. Biol. Res. 1991, 391-416

- 12) Morales TI, **Joyce ME**, Sobel ME, Danielpour D, Roberts AB, "Transforming Growth Factor- β in calf articular cartilage organ cultures: synthesis and distribution," Arch. Biochem. and Biophys. 288(2), Aug. 1991, 397-405.
- 13) **Joyce ME**, Roberts AB, Sporn MB, Bolander ME, Transforming growth factor- β and the initiation of chondrogenesis and osteogenesis in the rat femur. J. of Cell Biology 110; June 1990 2195-2207.
- 14) Scully SP, **Joyce ME**, Abidi N, Bolander ME, "The use of polymerase chain reaction generated nucleotide sequences as probes for hybridization," Molecular and Cellular Probes. 1990, (4), 485-495.
- 15) **Joyce ME**, Bolander ME, Terek RM, Jingushi S: Role of transforming growth factor- β 1 in fracture healing. In: Transforming Growth Factor- β s: Chemistry, Biology, and Therapeutics, eds KA Piez, MB Sporn, New York, NY, Vol 593. of Annals of the New York Academy of Sciences, 1990. Pp 107-123.
- 16) Bolander ME, Gardener J, Himel HH, Coyle J, **Joyce ME**, Thornton BC, Ruttimann U, Detection and measurement of simulated early rheumatoid lesions of the hand using digital subtraction radiography.. Investigative Radiology, 25(6), June 1990, 708-713.
- 17) McCarthy JA, Moore RE, Dunlap J, Steadman JR, **Joyce ME**, Shively RA: The biomechanical assessment of knee kinematics and laxity following anterior cruciate ligament reconstruction using biologic and synthetic grafts. Clin. Orthop., 1991.
- 18) **Joyce ME**, Jingushi S, Bolander ME,: Transforming growth factor- β in the regulation of fracture repair. In: Orthopaedic Clinics of North America - Pathologic Fractures in Metabolic Bone Disease. ed: J. Lane, W. B. Saunders, Philadelphia, PA, 21(1):199-209. Jan. 1990.
- 19) Dunlap J, McCarthy JA, **Joyce ME**, Manske P: Biochemical and histologic evaluation of pulley reconstructions in non-human primates. Jour. of Hand Surg. 15A(1)57-63, Jan. 1990.
- 20) Boden SD, **Joyce ME**, Oliver B, Heydemann A, Bolander ME: Estrogen receptor mRNA expression in callus during fracture healing in the rat. Calcified Tissue International, 45(5)325-326, Nov. 1989.
- 21) Dunlap J., **Joyce ME**, McCarthy JA, Shively RA: Quantification of the perfusion of the Anterior Cruciate Ligament and the effects of stress and injury to supporting structures., Am. J. of Sports Med., 17(6)808-812. 1989.

BOOK CHAPTERS:

- (1) **Joyce ME**, Andrews JR, Normal and Pathological Arthroscopic Anatomy of the Knee in Diagnostic and Operative Arthroscopy, Eds Andrews JR, Timmerman LA, W.B. Saunderson Co., Philadelphia, PA, 1997. Pp 254-273.
- (2) **Joyce ME**, Lou J, Manske PR; Tendon Healing: Molecular and Cellular Regulation in Tendon and Nerve Surgery in the Hand: A Third Decade Review, Eds: Hunter J, Schneider L, Mackin E; Mosbey, St. Louis, MO, 1997, Pp 286-296.
- (3) Jelsma R, **Joyce ME**, Andrews J,. "Open Surgical Procedures for Injuries to the Elbow in Throwers," in Operative Techniques in Sports Medicine. D. Drez, Ed. 1997.
- (4) **Joyce ME**, O'Brian MF, Lenke LG, The Molecular and Cellular Response of the Spinal Cord to Acute Injury. In: The Textbook of Spinal Surgery, 2nd ed., eds: KH Bridwell and RL DeWald., J. P. Lippincott, Philadelphia, PA, 1997, Pp 2361-2378.
- (5) **Joyce ME**, Perry CR, Fracture Healing and Bone Grafting. In: Handbook of Fractures, eds: CR Perry, JA Elstrom, AM Pankovich; McGraw Hill, New York, NY, 1994, Pp 29-32.
- (6) **Joyce ME**, Bolander ME, Growth Factors: An opportunity to manipulate healing at the cellular and molecular level, In: Bone Symposium '91, eds: AE Sayfer, J. Hollinger. Oregon Health Sciences University Press, Portland Oregon, 1991, (Pp 182-195)
- (7) **Joyce ME**, Bolander ME; Role of transforming growth factor- β in fracture healing: implications for bone grafting. In: Bone Grafts from Basic Science to Clinical Applications, eds: Reddi AH, Habal MB, W. B. Saunders, Philadelphia, PA, 1992, Pp 99-111.
- (8) Roberts AB, **Joyce ME**, Bolander ME, Sporn MS, Transforming Growth Factor- β : A Multifunctional Effector of Both Soft and Hard Tissue Regeneration, in Nordisk Insulin Foundation Proceedings, eds Bengt Westermarck and Chisteror Betscholtz, 1993
- (9) **Joyce ME**, Jingushi S, Roberts AB, Sporn MB, Bolander ME: Transforming growth factor- β initiates cartilage and bone formation *in vivo*. In: Calcium Regulation and Bone Metabolism, eds: DV Cohen, FH Glorioux, and TJ Martin, Elsevier Science Publishers, Amsterdam, Vol 10, 1990, Pp 317-323.
- (10) Bolander ME, **Joyce ME**, Boden SD, Oliver B, Heydemann A,: Estrogen receptor mRNA expression during fracture healing in the rat detected by polymerase chain reaction amplification. In: Calcium Regulation and Bone Metabolism, eds: DV Cohen, FH Glorioux, and TJ Martin, Elsevier Science Publishers, Amsterdam, Vol 10, 1990, 382-387.

- (11) Jingushi S, **Joyce ME**, Flanders KC, Hjelmanland L, Roberts AB, Sporn MB, Muniz O, Howell D, Dean D, Bolander ME: Distribution of acidic fibroblast growth factor, basic fibroblast growth factor and transforming growth factor- β in rat growth plate. In: Calcium Regulation and Bone Metabolism, eds: DV Cohen, FH Glorioux, and TJ Martin, Elsevier Science Publishers, Amsterdam, Vol 10, 1990, 298-303.

NATIONAL AND INTERNATIONAL PRESENTATIONS:

- (1) **Joyce ME**, Sports Medicine in High School: Role of the School Bases Health Center, New England School Bases Health Practitioners. Foxwoods, CT, April. 2000
- (2) **Joyce ME**, Injury, Healing and Inflammation: Cellular Mechanisms, and Implications for Clinical Practice in Sports Medicine, American Physical Therapy Association. Newport, RI, Oct. 1998.
- (3) **Joyce ME**, *Keynote Address*: Cellular and Molecular Surgery, The New Age of Gene Therapy. 17th Annual Sports Medicine Physician-Therapist Team Concept Conference Meeting, Sport Physical Therapy Section. Chicago IL, Oct. 1996.
- (4) **Joyce ME**, Timing of ACL Surgery, 17th Annual Sports Medicine Physician-Therapist Team Concept Conference Meeting, Sport Physical Therapy Section. Chicago IL, Oct. 1996.
- (5) **Joyce ME**, Tendonopathies in Soccer Injuries, Sports Medicine and Soccer Symposium, Southern Orthopaedic Society - Olympic Soccer, Birmingham AL, July, 1996.
- (6) **Joyce ME**, Tendonosis and Muscle Injuries in Baseball, 1996 14th Annual Injuries in Baseball Course, Birmingham AL, January, 1996.
- (7) **Joyce ME**, Shoulder Anatomy in the Throwing Athlete, 1996 14th Annual Injuries in Baseball Course, Birmingham AL, January, 1996.
- (8) **Joyce ME**, Inflammation and Healing of Athletic Soft Tissue Injuries, 1995 Injuries in Football and Basketball Course, Birmingham AL, May 1995.
- (9) **Joyce ME**, et. al., Role of IL-6 in Total Joint Arthroplasties that Fail from Osteolysis, 61st Annual Meeting of the AAOS Orlando, Florida, February 1995.
- (10) **Joyce ME**, et. al., Molecular Mechanism of Adhesion Formation During Flexor Tendon Healing, American Society for Surgery of the Hand, Cincinnati OH, October 1994
- (11) **Joyce ME**, "Transforming Growth Factor- β Localization in Acute Spinal Cord Injury," 11th International G.I.C.D. Congress on Spinal Cord, Arcahon, France, May 1994.
- (12) **Joyce ME**, "Tendon Healing: Cellular and Molecular Regulation" Hand Rehabilitation Foundation: Another Decade of Tendon and Nerve Surgery, Philadelphia, PA, March 1994.

- (13) **Joyce ME**, "Platelet-Derived Growth Factor Synthesis in Intramembranous Bone is Stimulated by Distraction Osteogenesis," Association for the Study and Application of the Methods of Ilizarov, New Orleans, LA Feb. 1994
- (14) **Joyce ME**, "The Cellular and Molecular Regulation of Tendon Healing" Shiners Hospital - Annual Research Meeting, New Orleans, LA, Feb. 1994.
- (15) **Joyce ME**, et al, "Astrocyte Response to Spinal Cord Injury: An Immunohistochemical Investigation." Cervical Spine Research Society, New York, NY, Dec. 1993.
- (16) **Joyce ME**, "Tendon Adhesion Formation is Stimulated by Exogenous Growth Factors." UCLA Symposia - Progress in basic research of wound repair and its application to clinical management of problematic wounds, Breckenridge, CO, March 1993, (Poster Sessions)
- (17) **Joyce ME**, "Role of Growth Factors in Tendon Healing: New Developments," Academic Orthopaedic Society Annual Meeting, New Orleans, LA, November 1992.
- (18) **Joyce ME**, et. al. "Synthesis and in situ Localization of TGF- β 1, TGF- β 2, PDGF, and bFGF During Flexor Tendon Healing." 38th Annual Meeting of the Orthopaedic Research Society, Washington DC, February 1992
- (19) **Joyce ME**, et. al. "Young Investigator's Workshop: the Experimental Design" Instructional Course Symposia. 46th Annual Meeting for American Society for Surgery of the Hand, Orlando Fla, October, 1991.
- (20) **Joyce ME**, "Growth Factors: An Opportunity to Manipulate Healing at the Cellular and Molecular Level." Bone Symposium '91, Portland, Oregon, July 1991.
- (21) **Joyce ME**, "Growth Factor Synthesis by Epitenocytes Following Flexor Tendon Injury: a Proposed Mechanism for Adhesion Formation: 37th Annual Meeting of the Orthopaedic Research Society, Aneheim, CA March 1991.
- (22) **Joyce ME**, "Differential Expression and Synthesis of TGF- β 1 and TGF- β 2 in Human and Rat Fracture Healing, 37th Annual Meeting of the Orthopaedic Research Society, Aneheim, CA March 1991. (poster session)
- (23) **Joyce ME**, U.S. - U.S.S.R. Scientific Workshop on Ballet Medicine, National Library of Medicine, National Institutes of Health, Bethesda MD, May 1990.
- (24) **Joyce ME**, "Transforming Growth Factor- β and the Initiation of Chondrogenesis and Osteogenesis in the Rat Femur" 1990 AAP/ASCI/AFCR National Meeting, Washington DC, May 1990.

- (25) **Joyce ME**, "Pathway of Transforming Growth Factor- β induced Mesenchymal Cell Differentiation is Dose Dependant" UCLA Symposia - Tissue Engineering, Keystone, CO, April 1990, (Poster Sessions)
- (26) **Joyce ME**, "Transforming Growth Factor- β Initiates Bone and Cartilage Formation in Rat Periosteum," 36th Annual Meeting of the Orthopaedic Research Society, New Orleans, LA, Feb. 1990.
- (27) **Joyce ME**, "Platelet-Derived Growth Factor Regulates the Initiation of Fracture Repair," 36th Annual Meeting of the Orthopaedic Research Society, New Orleans, LA, Feb. 1990.
- (28) **Joyce ME et. al.**, "Fracture Callus Organ Culture: an In Vitro model for Fracture Healing," 36th Annual Meeting of the Orthopaedic Research Society, New Orleans, LA, Feb. 1990. (Poster Sessions)
- (29) **Joyce ME**, "Cellular Regulation of Fracture Healing by Growth Factors," Guest Lecture at the Aging Institute, NIH, Baltimore, MD, Jan. 1990.
- (30) **Joyce ME**, "Role of Growth Factors in Fracture Healing", 3rd International Symposium on Tissue Repair, Miami, Fla., January 10-14, 1990
- (31) **Joyce ME**, "Role of Transforming Growth Factor- β in Cartilage and Bone Formation," NIH Research Day, Bethesda MD, September, 1989
- (32) **Joyce ME**, "Transforming Growth Factor- β initiates Cartilage and Bone Formation *in vivo*." First Joint meeting of the American Society of Bone and Mineral Research and the International Conference on Calcium Regulating Hormones. Montreal, Canada, September, 1989
- (33) **Joyce ME**, "Transforming growth factor- β is expressed and synthesized during fracture healing." New York Academy of Sciences meeting on: Transforming Growth Factor- β s: chemistry, biology and therapeutics. (poster session) Alexandria, VA, May 1989
- (34) **Joyce ME**, "Analysis of estrogen receptor expression in rat fracture healing by polymerase chain reaction amplification," Poster session, UCLA Symposia - The Polymerase Chain Reaction: Methodology and Applications, Keystone, CO, April 1989
- (35) **Joyce ME**, "The Role of Transforming Growth Factor- β in Fracture Repair." The Walter Reed Bone Symposium, Bethesda, MD, March 23-25, 1989.
- (36) **Joyce ME**, "Expression and Localization of Transforming Growth Factor- β in a model of Fracture Healing." 35th Annual meeting of the Orthopaedic Research Society, Las Vegas, Feb. 1989

- (37) **Joyce ME**, "Transforming Growth Factor- β in Fracture Healing. Grand Rounds, National Institute of Dental Research.", January 1989
- (38) **Joyce ME** et. al., "Nucleotide Sequence of the Naphthalene Dioxygenase Gene on the Nah 7 Plasmid of *Pseudomonas putida* PpG7". Poster sessions. American Society for Microbiology meeting in St. Louis, MO, March 1984.

ABSTRACTS:

- (1) Hattersley G, Cox K, Soslowsky LJ, Hewick R, **Joyce ME**, Rosen V, Bone Morphogenetic Proteins 2 and 12 alter the attachment of tendon to bone in a rat model: A histological and biomechanical investigation. 44th Annual Meeting of the Orthopaedic Research Society, New Orleans, LA, March 1998.
- (2) **Joyce ME**, Guerra JJ, Lemak LJ, Clancy WG, Andrews JR, Increased Prevalence and Severity of Intraarticular Damage When ACL Reconstruction is Delayed. 9th Annual Specialty Day Meeting of AOSSM at the AAOS, Atlanta, Fla, . Feb 25, 1996
- (3) Guerra JJ, **Joyce ME**, Wilk K, Clancy WG, Andrews JR, Effect of Surgical Timing on the Incidence of Arthrofibrosis Following ACL Reconstruction with Accelerated Rehabilitation, 2nd World Congress on Sports Trauma / AOSSM 22nd Annual Meeting, June 1996, Orlando Florida
- (4) Parry SA, Sutherland CJ, Miller G, Gildon J, **Joyce ME**, Synovial fluid IL-6 levels in failed total joint arthroplasty with osteolysis, 41th Annual Meeting of the Orthopaedic Research Society, Orlando FL, February 1995
- (5) **Joyce ME**, Parry S, Miller G, Gildon J, Sutherland CJ, "Role of IL-6 in Total Joint Arthroplasties that Fail from Osteolysis", 61st Annual Meeting of the AAOS Orlando, Florida, February 1995.
- (6) O'Brian MF, Lenke LG, Bridwell KH, **Joyce ME**, Astrocyte Response to Spinal Cord Injury: An Immunohistochemical Investigation. Federation of Spine Associations, AAOS - Specialty Day, Orlando, FA (accepted, 1995).
- (7) **Joyce ME**, Aoki M, Lou J, Manske PR, Molecular Mechanism of Adhesion Formation During Flexor Tendon Healing, American Society for Surgery of the Hand, Cincinnati OH, (accepted, 1994)

- (8) **Joyce ME**, Luhmann S, Bain S, Pearson R, Lou J, Miller G, Platelet-Derived Growth Factor Synthesis in Intramembranous Bone is Stimulated by Distraction Osteogenesis, Association for the Study and Application of the Methods of Ilizarov, New Orleans, LA 1994
- (9) Parry SA, Gilden J, Sutherland CJ, Lohabach B, Miller G, **Joyce ME**, Role of IL-6 in Total Joint Arthroplasties that Fail from Massive Osteolysis, American Orthopaedic Association Resident Conference, Atlanta GA, May 1994
- (10) O'Brian MF, Lenke LG, Bridwell KH, **Joyce ME**, Astrocyte Response to Spinal Cord Injury: An Immunohistochemical Investigation. American Spinal Injury Association, Philadelphia, PA , April 1994.
- (11) O'Brian MF, Lenke LG, Bridwell KH, **Joyce ME**, Astrocyte Response to Spinal Cord Injury: An Immunohistochemical Investigation. Cervical Spine Research Society, New York, NY, Dec. 1993.
- (12) Jingushi A, **Joyce ME**, Bolander ME, Basic Fibroblast Growth Factor in Rat Fracture Healing, 39th Annual Meeting of the Orthopaedic Research Society, San Francisco, CA, February 1993
- (13) **Joyce ME**, Manske PR, "Tendon Adhesion Formation is Stimulated by Exogenous Growth Factors," J. of Cellular Biochemistry, Supplement 17E, Wiley-Liss Inc., New York, 1993
- (14) Bolander ME, Jingushi S, **Joyce ME**, Izumi T, "Growth Factor Regulation of Fracture Healing," J. of Cellular Biochemistry, Supplement 17E, Wiley-Liss Inc., New York, 1993
- (15) **Joyce ME**, Pruitt D, Manske PR, "Synthesis and in situ Localization of TGF- β 1, TGF- β 2, PDGF, and bFGF During Flexor Tendon Healing." 38th Annual Meeting of the Orthopaedic Research Society, Washington DC, February 1992
- (16) Scully SP, **Joyce ME**, Heydemann A, Bolander ME, Articular Cartilage Healing in vitro: Modulation by bFGF and TGF- β 1, 1990 Gordon Conference on Bioengineering and Orthopaedic Science, July 15, 1991, Kingston RI
- (17) **Joyce ME**, Scully SP, Flanders K, Heydemann A, Bolander ME, Differential expression and synthesis of TGF- β 1 and TGF- β 2 in human and rat fracture healing. 37th Annual Meeting of the Orthopaedic Research Society, Anaheim, CA March 1991.
- (18) **Joyce ME**, Pruitt D, Russell J, Manske PR, Growth factor synthesis by epitenocytes: a model for adhesion formation following tendon injury, 37th Annual Meeting of the Orthopaedic Research Society, Anaheim, CA March 1991.

- (19) Abidi N, Scully SP, Regan J, Heydemann A, **Joyce ME**, Acidic FGF gene expression during rat fracture healing determined by quantitative polymerase chain reaction, Ortho. Trans. Vol 15(2):509, Sept 1991.
- (20) Jingushi S, Hjelmeland L, **Joyce ME**, Jaye M, Sugioka Y, Bolander ME, Acidic Fibroblast Growth Factor in Fracture Healing - Role for Chondrogenesis. Ortho. Trans. Vol 15(2):490-491, Sept 1991.
- (21) Scully SP, **Joyce ME**, Heydemann A, Bolander ME, Articular cartilage healing in vitro: modulation by bFGF and TGF- β 1, Ortho. Trans. Vol 15(2):492, Sept 1991.
- (22) Izumi T, Scully SP, Heydemann A, **Joyce ME**, Bolander ME, Transforming Growth Factor- β Induces Type II Collagen Gene Expression in Cultures of Periosteal Cell, Ortho. Trans. Vol 15(2):406-407, Sept 1991.
- (23) **Joyce ME**, Kittredge B, Bolander M., Pathway for Transforming Growth Factor- β induced mesenchymal cell differentiation is dose dependant. J. of Cellular Biochemistry, Supplement 14E, Wiley-Liss Inc., New York, 1990
- (24) **Joyce ME**, Jingushi S, Heydemann A, Roberts AB, Sporn MB, Bolander ME, Transforming growth factor- β initiates bone and cartilage formation in rat periosteum. Ortho. Trans. Vol 14(2):460-462, Sept 1990.
- (25) **Joyce ME**, Heydemann A, Bolander ME, Platelet-derived growth factor regulates the initiation of fracture repair. Ortho. Trans. Vol 14(2):460-462, Sept 1990.
- (26) **Joyce ME**, Terek R, Jingushi S, Heydemann A, Romero A, Bolander ME, Fracture callus organ culture: an in vitro model for fracture healing. Ortho. Trans. Vol 14(2):460-462, Sept 1990.
- (27) Jingushi S., **Joyce ME**, Heydemann A, Bolander ME, Correlation of gene expression for extracellular matrix proteins with histological changes in rat femur fracture repair. Ortho. Trans. Vol 14(2):460-462, Sept 1990.
- (28) Jingushi S., **Joyce ME**, Flanders KC, Hjelmeland L, Roberts AB, Sporn MB, Abidi N, Bolander ME, Scully SP, Distribution of acidic fibroblast growth factor, basic fibroblast growth factor, and transforming growth factor- β in rat growth plate. Ortho. Trans. Vol 14(2):460-462, Sept 1990.

- (29) **Joyce ME**, Nemeth GG, Jingushi S, Soltero R, Heydemann A, Ramero A, Flanders KC, Roberts AB, Sporn MB, Bolander ME: Transforming growth factor- β 1 is expressed and synthesized during fracture healing. In: Transforming Growth Factor- β s: Chemistry, Biology, and Therapeutics, eds KA Piez, MB Sporn, New York, NY, Vol 593. of Annals of the New York Academy of Sciences, 1990. Pp 347-350.
- (30) Jingushi S, Heydemann A, **Joyce ME**, Romero A, Soltero R, Bolander ME: Acidic fibroblast growth factor is synthesized in fracture callus by inflammatory cells around the blood clot and regulates cartilage formation during fracture healing. J. Bone Min. Res., 4(Sup. 1):S-285, August 1989.
- (31) Roberts AB, Flanders KC, Heine UI, **Joyce ME**, Bolander ME, Sporn MB: TGF- β : major role in regulation of extracellular matrix. In: Transforming Growth Factor- β s: Chemistry, Biology, and Therapeutics, eds KA Piez, MB Sporn, New York, NY, Vol 593. of Annals of the New York Academy of Sciences, 1990.
- (32) **Joyce ME**, Boden SD, Oliver B, Heydemann A, Bolander ME. Analysis of Estrogen Receptor in Rat Fracture Healing by Polymerase Chain Reaction Amplification. J. of Cellular Biochemistry, Supplement 13E, Allen R. Liss, New York, 1989
- (33) **Joyce ME**, Nemeth GG, Jingushi S, Soltero R, Heydemann a, Romero A, Flanders KC, Roberts AB, Sporn MB, Bolander ME: Expression and localization of transforming growth factor- β 1 in a model of fracture healing. Ortho. Trans. Vol 13(2):460-462, Sept 1989.
- (34) Terek RM, Nemeth GG, Heydemann A, Macey LR, **Joyce ME**, Bolander ME: Transforming growth factor- β suppresses type II collagen expression in fracture healing. Ortho. Trans. Vol 13(2)460-462, Sept 1989.
- (35) Jingushi S, **Joyce ME**, Flanders KC, Hjelmanland L, Roberts AB, Sporn MB, Muniz O, Howell D, Dean D, Bolander ME: Distribution of acidic fibroblast growth factor, basic fibroblast growth factor and transforming growth factor- β in rat growth plate. Gordon Conference, Meridan, NH, July 1989.
- (36) Terek RM, Nemth GG, Heydemann A, **Joyce ME**, Macey LR, Bolander ME, Transforming Growth Factor- β suppresses cartilage specific gene expression during endochondral bone repair. Am Fed Clin Res Abstracts, May, 1989.
- (37) Bolander ME, Jingushi S, Terek RM, **Joyce ME**, Nemeth GG, Effect of TGF- β , aFGF, and bFGF on fracture healing, Calcif. Tissue Int. 44S:S-1, March 1989.

- (38) Jingushi S, Heydemann A, **Joyce ME**, Bolander ME, mRNA Expression for Type I procollagen, Alkaline Phosphatase, osteonectin and bone GLA protein in soft callus during rat femur fracture healing. Proceedings Conference on Bone Grafts and Bone Substitutes, Tampa Fla, Jan 1989.
- (39) Dunlap J, McCarthy JA, **Joyce ME**, Quantification of the Perfusion of the ACL and Effects of Anterior Stress and Fat Pad Division. Salt Lake City, Utah. AOA Residents Conference. March 1987.
- (40) Dunlap J, McCarthy JA, **Joyce ME**, Biomechanical and Histologic Evaluations of Pulley Reconstructions in Non-Human Primates. American Society for Surgery of the Hand. Fifth Annual Residents' and Fellows Conference, September 1987.
- (41) Dunlap J, McCarthy JA, **Joyce ME**, Quantification of the Perfusion of the ACL and the Effects of Stress and Injury to Supporting Structures, Ortho Transaction Vol 2, 563-564, 1987.