#### William James Brooks, DO

Born - September 7, 1952 Wife - Barbara Lynn Campbell Brooks - Married November 27, 1986 Son - James Campbell Brooks - Born September 5, 1988

#### Curriculum Vitae

#### 1966-70 Elmhurst High School; Ft. Wayne, Indiana 1970 **National Honor Society** 1970-73 Earlham College; Richmond, Indiana (Philosophy and Pre-medical) Bachelor of Arts in Philosophy 2013 1973-75 Life Research Centre for Studies; Brantford, Ontario, Canada 1975 Indiana University; Bloomington, Indiana (Pre-medical) Chicago College of Osteopathic Medicine; Chicago, Illinois 1975-80 1976 National Institutes of Mental Health Psychiatry Fellowship 1977-80 Chicago College of Osteopathic Medicine Psychiatry Fellowship 1980 Doctor of Osteopathy 1980-81 Rotating Internship: Tucson General Hospital; Tucson, Arizona 1981 Diplomate of the National Board of Examiners for Osteopathic Physicians and Surgeons

# Diplomate of the American Board of Holistic and Integrative Medicine

Manipulative Medicine)

Professional Experience and Appointments

1972	Orderly - Psychiatric Ward, St. Joseph's Hospital; Ft. Wayne, Indiana
1981-85	Private practice of Comprehensive Osteopathic Manipulative Medicine - protégé of Robert Fulford, DO; Tucson, Arizona
1981-85	Tucson General Hospital; Tucson, Arizona - Active Staff
1981-83	Attending Physician, West Center (Alcohol & Drug Rehabilitation)
1981-83	Surgical Assistant
1985-85	Clinical Instructor, Osteopathic Principles and Practice

Board Certified, American Osteopathic Board of Neuromusculoskeletal Medicine (then known as American Osteopathic Board of Special Proficiency in Osteopathic

1991

2012

Education

1985-88	Private practice of Comprehensive Osteopathic Manipulation; St. Paul, Minnesota
1985-88	Clinical Assistant Professor of Family Medicine (Preceptor), College of Osteopathic Medicine of the Pacific; Pomona, California
1986-88	Courtesy Staff - Midway Hospital; St. Paul, Minnesota
1986-88	Consultant - Biomechanics Clinic, Department of Orthopedic Surgery, Park Nicollet Medical Center; Minneapolis, Minnesota
1988	Provisional Staff - Methodist Hospital; Minneapolis, Minnesota
1988-92	Cofounder with Mark Bookhout, PT, MS of Biomechanix - a physical medicine education partnership
1989	Consultant for Biomechanics and Manual Medicine - Department of Surgery, Section of Orthopedic Surgery, The University of Arizona College of Medicine; Tucson, Arizona
1989-92	Clinical Instructor of Surgery - Department of Surgery, Section of Orthopedic Surgery (Full time academic faculty), The University of Arizona College of Medicine; Tucson, Arizona
1989-98	Associate Staff - University Medical Center (Privileges: manipulation of the musculoskeletal system, including manipulation under anesthesia); Tucson, Arizona
1991-96	Assistant Clinical Scientist - Arthritis Center, The University of Arizona College of Medicine; Tucson, Arizona
1992-93	Medical Director - University Physicians Orthopedic and Sports Medicine Center; Tucson, Arizona
1992-94	Clinical Assistant Professor of Surgery - Department of Surgery, Section of Orthopedic Surgery (Full time academic faculty), The University of Arizona College of Medicine; Tucson, Arizona
1993-96	Chief Consulting Physician for Rehabilitation - Department of Intercollegiate Athletics, The University of Arizona; Tucson, Arizona
1994-96	Assistant Professor of Clinical Surgery (College wide title change) - Department of Surgery Section of Orthopedic Surgery (Full time academic faculty), The University of Arizona College of Medicine; Tucson, Arizona
1995-96	Unpaid Leave of Absence from The University of Arizona College of Medicine
1995-96	Private Practice of Osteopathic Manipulative Medicine; Tucson, Arizona

1996-99	Associate Professor - Department of Osteopathic Principles and Practice, University of Health Sciences College of Osteopathic Medicine; Kansas City, Missouri
1997-99	Associate Staff - Park Lane Medical Center (Privileges: manipulation of the musculoskeletal system, including manipulation under anesthesia); Kansas City, Missouri
1999-2017	Private practice of Comprehensive Osteopathic Manipulative Medicine; Kansas City, Missouri
2000-19	Co-founder with Michael M. Patterson, PhD, DO (HON) and President: Restorative Care Foundation
2004-8	Clinical Associate Professor - Department of Osteopathic Principles and Practice, Nova Southeastern University College of Osteopathic Medicine; Fort Lauderdale, Florida
2007-8	Cofounder with Esteban Azevedo, DPT: Restorative Care Study Group; Kansas City, Missouri
2008-	Cofounder with Michael M. Patterson, PhD, DO (HON): Restorative Care Partners - a physical medicine education partnership (M. Shane Patterson, DO current partner)
2010-15	Clinical Associate Professor of Osteopathic Manipulative Medicine - Department of Family Medicine, Kansas City University of Medicine and Biology; Kansas City, Missouri
2016-22	Adjunct Research Scientist, Andrew Taylor Still Research Institute, Andrew Taylor Still University; Kirksville, Missouri
2017-	Designated Campus Colleague, Department of Orthopedic Surgery University of Arizona College of Medicine, Tucson, Arizona
2019-	Executive Committee, DO-Touch.net
2020-	Private practice of Comprehensive Osteopathic Manipulative Medicine; Tucson, Arizona
2023-	Clinical Associate Professor, Department of Clinical Medicine (Preceptor), Burrell College of Osteopathic Medicine, Las Cruces, New Mexico
2023-	Volunteer Clinical Professor, Department of Neurology, University of California Davis School of Medicine; Sacramento, California

### Honors and Awards

1980	Chicago College of Osteopathic Medicine; Chicago, Illinois Sigma Sigma Phi Who's Who Among Students in American Universities and Colleges Outstanding Achievement in Psychiatry
1991	An Active Teacher - the American Academy of Family Physicians
1995	Who's Who in the West
1998	Who's Who in the Midwest
2007	American Osteopathic Association Mentor Hall of Fame
2009	American Osteopathic Association Mentor Hall of Fame
2010	Top Peer Reviewer Journal of the American Osteopathic Medical Association
Service	
1981-	Clinical practice devoted to restorative care of patients with tertiary, chronic, complex musculoskeletal pain syndromes and children with developmental delays
1981-	Elected preceptor of Osteopathic Manipulative Medicine for numerous pre and postgraduate DOs, MDs, and PTs.
1982-85	Cochairman/chairman Osteopathic Concepts Committee, Tucson General Hospital Tucson, Arizona
1983	Coordinator of Speaker's Bureau and member of Steering Committee, Physicians for Social Responsibility; Tucson, Arizona
1990-92	Arizona Osteopathic Medical Association, Comprehensive Health Planning Committee
1998-	Peer Reviewer for the Journal of the American Osteopathic Association
2001-	Editorial Review Board for Medical Science Monitor
2003	Editorial consultant for Pediatric Rehabilitation
2007-8	Co-leader with Esteban Azevedo, PT, Restorative Care Study Group - participants included DOs, MDs, PTs, ODs, and students (1.5 hours monthly); Kansas City, Missouri
2009-15	Board of Trustees, Kansas City Regional Osteopathic Medical Association

2011-15	Vice President, Kansas City Regional Osteopathic Medical Association
2017-	Peer Reviewer for Journal of Manual and Manipulative Therapy
	The University of Arizona College of Medicine Tucson, Arizona
1990	Ad hoc Committee for Development of a Multi-Disciplinary Pain Management Center, Arizona Health Sciences Center
1991-95 1992-93	Physical Therapy Advisory Committee, University Medical Center University Physicians Ambulatory Care Committee
1992-94	Department of Surgery Clinic Committee
1993	Department of Surgery Committee for Peer Review
2017-	The Study Group (Orthopedic Outcomes Research): regular participant
2017-	Orthopedic Surgery Grand Rounds and Spine Conference: regular participant
2017-	Rheumatology Grand Rounds and Radiology Conference: regular participant
	Kansas City University of Medicine and Biology College of Osteopathic Medicine Kansas City, Missouri
1996-99	Faculty liaison for health, liability, & malpractice insurance
1996-99	Prospective student interviewer and student advisor
1997-99	Committees: educational resources, curriculum, health / safety
1997-99	Undergraduate American Academy of Osteopathy advisor
1997-99	Sponsor for six guest speaker presentations
1999-00	Osteopathic Diagnosis and Treatment lab instructor
2014-15	Osteopathic Manipulative Medicine lab instructor

## Earlham College Richmond, Indiana

2010	Premedical Club "Medical Science, Osteopathy, and Osteopathic Manipulative Medicine"
2012	Alumni Panel: "Perspectives on Life After Earlham for Science Majors"
Scholarly	Activities
	Tucson General Hospital Tucson, Arizona
1983-84	Lecture series for Interns and Residents "Osteopathic Concepts" (10 hours)
1985	Lecture series for Interns and Residents "Osteopathic Concepts" (10 hours)
	The University of Arizona College of Medicine Tucson, Arizona
1984	Lecture for the Omni Alternative Premedical Group  "Introduction to Osteopathic Medicine" (2 hours)
1985	Lecture for sophomore class "Introduction to Osteopathic Medicine"
1985	Seminar for sophomore class "Osteopathy" (18 hours)
1989	Lectures for the Section of Rheumatology "The Musculoskeletal Examination"
1989	Report for the Section of Rheumatology on the First International Symposium on Myofascial Pain and Fibromyalgia
1989	Lecture for the Department of Emergency Medicine "Introduction to Biomechanics and Manual Medicine"
1989	Lecture for the Department of Family and Community Medicine "Introduction to Biomechanics and Manual Medicine"
1989	Lecture / demonstration for University Medical Center Physical Therapy "Introduction to Biomechanics and Manual Medicine"

1989	Lecture / demonstrations for the Section of Orthopedic Surgery "Introduction to Biomechanics and Manual Medicine" (4 hours)
1989	In-service for the Staff of University Physician's Obstetrics & Gynecology Clinic "Introduction to Biomechanics and Manual Medicine"
1989	In-service for the Staff of University Physician's Orthopedic Sports Medicine Center "Introduction to Biomechanics and Manual Medicine"
1990	Lecture for the Ad hoc Committee for Development of a Multidisciplinary Pain Management Center, Arizona Health Sciences Center "Rehabilitation of the Musculoskeletal System"
1990	Required preceptor for Family Medicine Residents as contributor to a rotation in Ambulatory Orthopedics
1990-91	Seminar for Orthopedic Surgery Residents, University Medical Center Physical Therapists, and College of Medicine Faculty "Introduction to Biomechanics and Manual Medicine - Diagnostics" (24 hours)
1990-91	Various case presentations at Rheumatology Radiology weekly conferences
1990-93	Establishment and leadership of monthly Musculoskeletal System Rehabilitation Journal Club, Arizona Health Sciences Center
1990-95	Case presentations at Orthopedic Surgery weekly conferences
1991	Lecture for the Section of Geriatrics "Introduction to Biomechanics and Manual Medicine"
1991-92	Seminar for Orthopedic Surgery Residents, University Medical Center Physical Therapists, and College of Medicine Faculty "Introduction to Biomechanics and Manual Medicine - Therapeutics" (24 hours)
1992	Lecture for the Section of General (Internal) Medicine "Introduction to Biomechanics and Manual Medicine"
1992	Lecture for the Arthritis Update "Nonsurgical Treatment of Low Back Pain"
1993	Lecture for the Geriatric Rheumatology and Rehabilitation Conference "Manipulative Therapy and Low Back Pain"
1993	Lecture / demonstration for University Medical Center Physical Therapy "Neuromuscular Regulation and Neuromuscular Reeducation"

1993	"Introduction to Biomechanics and Manual Medicine"
1993	Seminar for Freshman and Sophomore Medical Student Enrichment Elective "Introduction to the Biomechanical Evaluation and Manual Medicine" (27 hours)
1993	Leadership of the Rehabilitation Section of the University of Arizona Arthritis Center
1993	Lecture / demonstration for the Department of Neurology, Grand Rounds Co-presenter with Constantine Moschonas, MD "Cervical Manipulation and Cerebral Vascular Accident"
1993	Lecture/demonstration with Jon Nisbet, MD The University of Arizona Arthritis Center at Canyon Ranch "A Healthy Lifestyle and Arthritis - Exercise"
1993	Discussant for presentation by Steve Rayle, MD The University of Arizona Arthritis Center at Canyon Ranch "Complementary Medical Approaches to Arthritis Care"
1994	Lecture for The University of Arizona Multidisciplinary Research Workshop on Biomechanics, Robotics, and Prosthetics"  "The Biomechanical Evaluation: a) Sacroiliac Joint and b) Pulmonary Function"
1994	Lecture / case presentation / demonstration for the University of Arizona Athletic Trainers "The Biomechanical Evaluation"
1994	Lecture for The University of Arizona Arthritis Center at Canyon Ranch "Alternative Medicine"
1994	Seminar for the Section of Orthopedic Surgery "Introduction to Biomechanics and Manual Medicine" (20 hours)
1994	Seminar for freshman and sophomore Medical Student Enrichment Elective "Introduction to the Biomechanical Evaluation and Manual Medicine" (4 hours)
1994	Lecture / demonstration for the Collaborative Pain Management Group "Biomechanics and Manual Medicine - Preemptive Pain Management"
1995	Lecture for the Premed Club "Introduction to Osteopathic Medicine" (2 hours)
1996	In Service for the University of Arizona Wildcat Athletic Trainers, Coaches, and Physicians "The Biomechanical Evaluation and Performance Enhancement" (2 hours)

1996	In Service for the University of Arizona Wildcat Athletic Trainers and Physicians Co-presenter with Jerry Hesch, PT "Spring Testing of Sacroiliac Joint and Pelvic Motion" (4 hours)
2010	Grand Rounds for the Section of Rheumatology "Functional Pathology of the Musculoskeletal System" (1 hour)
2013	Grand Rounds for the Section of Rheumatology "Functional Pathology of the Musculoskeletal System" (1 hour)
2014	Lecture / demonstration for Interdisciplinary Consortium on Advanced Motion Performance (iCAMP) "Functional Pathology of the Musculoskeletal System" (2 hours)
2014	Lecture / demonstration for Orthopedic Surgery Residents "Functional Pathology of the Musculoskeletal System" (90 minutes)
2016	Grand Rounds for the Section of Rheumatology "Functional Pathology of the Musculoskeletal System" (1 hour)
	https://www.youtube.com/watch?v=ZYQi9zUHaqg&feature=youtu.be
2017	Lecture for The Study Group (Orthopedic Outcomes)  "Research program for Functional Pathology of the Musculoskeletal System paradigm applied to chronic, multiregional, posttraumatic musculoskeletal pain syndromes" (1 hour)
2018	Grand Rounds for the Section of Rheumatology "Restorative Care of Chronic Nonspecific Multiregional Pain Syndromes Including Headache and Facial Pain" (1 hour)
2018	"Restorative Care of Chronic Nonspecific Multiregional Pain Syndromes

Kansas City, Missouri

1996

Lecture for the Faculty "Diagnosis of Sacral Dysfunction"

Lecture for the Undergraduate Academy of Osteopathy

"An Expanded Concept of the Musculoskeletal System - Somatic Dysfunction and the Biomechanical Evaluation"

9 June 2023

Developed and taught lectures (one hour) and labs (two hour) primarily for "Osteopathic Principles and Practice" and for "Osteopathic Diagnosis and Treatment" courses, but also for University personnel, Undergraduate American Academy of Osteopathy members, and Park Lane Medical Center externs and Family Medicine Residents. Workload was approximately 35 lectures and labs for 1996-97, 45 for 1997-98, and 45 for 1998-99. Major topics included:

#### Lectures

- Philosophy of Osteopathic Medicine
- Systems Theory and Structure / Function Concepts
- o Musculoskeletal System an Organ System
- Clinical Science and the Art of Medicine
- Principles of General Kinesiology
  - Basic
  - Advanced
- Somatic Dysfunction
  - Basic Concepts
  - Comprehensive Evaluation
  - Etiologies
- Spinal Kinesiology
- o Gait
- Indications and Contraindications for Osteopathic Manipulative Medicine
- Structural Pathology of the Spine: Orthopedic and Rheumatologic
- General Principles of Musculoskeletal Rehabilitation
- o The Cranial / Sacral Mechanism
  - Rationales
  - Developmental Anatomy, Physiology, Functional Pathology, and Structural Pathology
  - Clinical Significance
- The Pulmonary System

#### Labs

- Spatial Terminology and Bony Landmarks
- Kinesiology
  - Terminology of Motion
  - Linkage and Postural Context
- o Regional / Multiregional Movement Available Motion in Multiple Postural Contexts
- Analysis of Movement Patterns Symmetry and Proportionality
- Advanced Musculoskeletal Clinical Evaluation
  - Neuromuscular Regulation
  - Staging Evaluation and Care
  - Exercise Prescription
  - Short Lower Extremity Syndrome
- o Cervical Spine Diagnosis, High Velocity Low Amplitude, and Muscle Energy
- o Sacrum and Pelvis Diagnosis and High Velocity Low Amplitude
- Lumbar Spine Diagnosis and High Velocity Low Amplitude
- Advanced Evaluation of the Thoracolumbar Spine and Rib Cage

- Active Motion of the Cranial / Sacral Mechanism
  - Rhythmic Impulse
  - Flexion and Extension Phases
- Passive Motion of the Cranium
  - Unpaired Midline Bones
  - Paired Bones

#### Course Materials & Administration

- Each presentation was accompanied by an extensive outline. Major foci included the development of a 33-page lab manual on cranial manipulation and a 155-page lab manual on the biomechanical evaluation.
- Mentor/evaluator for all freshman Osteopathic Principles and Practice and sophomore Osteopathic Diagnosis and Treatment labs and practical exams
- o Preparation of written examination questions on all lectures given

#### **Clinical Instruction**

- Case presentations and follow-up presentations for Osteopathic Principles and Practice
- Clinical mentor of Osteopathic Principles and Practice Departmental Fellows, preclinical students, and externs

1997	Authored major revision of syllabus for Osteopathic Principles and Practice course
1997	Health Track mentor
1997-99	Central role in organizing new Osteopathic Principles and Practice Departmental curriculum for entire two-year cycle
1997-99	Course coordinator for sophomore course: "Osteopathic Diagnosis and Treatment"
1998	Invited lecturer University of Health Sciences Research Day "Real-time Ultrasonographic Evaluation of Sacroiliac Joint Motion" (20 minutes) "The Sternal Displacement Meter" (20 minutes)
1998-99	Weekly Undergraduate American Academy of Osteopathy review sessions
1999	Lectures and labs for the Pediatrics Club and Undergraduate Academy of Osteopathy "Robert Fulford, DO and Cranial Manipulation" (12 hours)
2000	Discussion for the Sports Medicine Club "OMT for the Athletic Population" (2 hours)
2000	Lectures and labs for the Undergraduate American Academy of Osteopathy

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"Restorative Care of Chronic Musculoskeletal Pain Syndromes" (10 hours)

2001	Lectures and labs for the Undergraduate American Academy of Osteopathy "Comprehensive Biomechanical Diagnostics and Restorative Care of Chronic Musculoskeletal Pain Syndromes" (40 hours x 2)
2002	Lectures and labs for the Undergraduate American Academy of Osteopathy "Cranial Manipulation" (12 hours)
2005	Lecture / demonstrations for the Undergraduate American Academy of Osteopathy "Somatic Dysfunction" (1.5 hours)
2008	Lecture / demonstrations for the Undergraduate American Academy of Osteopathy "Somatic Dysfunction" (1.5 hours)
2009	Lecture / demonstrations for the Undergraduate American Academy of Osteopathy "Somatic Dysfunction" (1.5 hours x 3)
2010	Lecture / demonstrations for the Undergraduate American Academy of Osteopathy "Somatic Dysfunction" (7 hours)
2012	Lecture / demonstration for the Science Friday "Restorative Care Foundation – Research History and Prospects" (1 hour)
2013	Lecture / demonstration for the Student American Academy of Osteopathy "The Role of Osteopathic Manipulative Medicine in the Care of a Patient with Osteoarthritis of the Hip" (4 hours)
2013	Lecture / demonstration for the Student American Academy of Osteopathy: "Perspectives on Osteopathic Manipulative Medicine" (1.5 hours)
2014	Lecture / demonstration for the Student American Academy of Osteopathy: "Perspectives on Osteopathic Manipulative Medicine (90 minutes)
2015	Lecture / demonstration for the Student American Academy of Osteopathy: "Functional Pathology of the Musculoskeletal System" (3 hours)
2015	Lecture / case presentation/demonstration / lab for the Osteopathic Manipulative Medicine Fellows "Functional Pathology of the Musculoskeletal System" (>8 hours)
	Nova Southeastern University College of Osteopathic Medicine Fort Lauderdale, Florida
2002	Labs for the sophomore "New Concepts of Motion Palpation and Interpretation" (1.5 hours x 4)

2004	Lecture / demonstration for the Family Medicine Residents "Motion Testing and Proportionality" (1 hour)
2007	Lecture for the OPP Fellows "Functional Biomechanical Exam" (1.5 hours)
	University of Kansas School of Medicine Kansas City, Kansas
2003	Regular attendance Spine Surgery Conferences
2008	Lecture / demonstration for Physical Medicine and Rehabilitation Department "Somatic Dysfunction" (5 hours)
2012	Lecture / demonstration for the Integrative Medicine Program "Functional Pathology of the Musculoskeletal System" (2 hours)
	AT Still University Kirksville College of Osteopathic Medicine Kirksville, Missouri
1987	Lecture for Founder's Day "My Experiences with Robert Fulford, DO"
2002	For Founder's Day Lecture: "A Critique of Current Concepts of Somatic Dysfunction" (1.5 hours)
	Panel Discussant: "Objectifying the Musculoskeletal Exam" (1.5 hours)
	Labs: "Introducing the Biomechanical Exam" (2 hours x 2)
2003	Lecture / lab for Founder's Day "Evaluating the Musculoskeletal System in Search of the Key Dysfunction" (5 hours)
2012-	Co-investigator: DO-Touch Practice Based Research Network
2014	Lecture / demonstration for Osteopathic Manipulative Medicine Residents and Fellows "Functional Pathology of the Musculoskeletal System (2 hours)
2015	Lecture/demonstration for the Student Academy of Osteopathy "Functional Pathology of the Musculoskeletal System" (2.5 hours)

2017	Lecture for the DO-Touch Network Annual Meeting "NIH Funded Manual Medicine Research 2012-17" (15 minutes)
2018	Lectures for the DO-Touch Network Annual Meeting  "Finely Discriminating Adverse Events – Can Some Be Therapeutic?" (1 hour) Co-presenter with Jane Johnson, MA  "OMT Safety – What is the Evidence?" (2 hours)  "How Does DO-Touch.NET Build the Evidence-base in OMM?" (1 hour)
2019	Lecture for the DO-Touch Network Annual Meeting Co-presenter with Brian Degenhardt, DO "Adverse Events Following OMT: Update on the Evidence?" (2 hours)
2021	Journal Club for the DO-Touch.NET PBRN "Cervical Manipulation and Stroke"
2022	Discussant for the International Consortium on Manual Therapies "Controversies in Manual Therapy"
	Medical University of South Carolina Department of Neuroscience Charleston, South Carolina
2009	Visiting Professorship – lecture / demonstrations (6 days)  "Functional Pathology of the Musculoskeletal System" (45 min to 2.5 hours each)  Neurology Residents and Faculty  Developmental Pediatric Group  Neurology Medical Students  Physical Therapy Students and Faculty  Family Medicine Residents and Faculty  Physical Medicine and Rehabilitation Student Interest Group and Faculty
<b>Semina</b> Principle	rs e author / presenter
	Riomachaniy

Audiences included D.O.s, M.D.s, and P.T.s, from the United States.

1988-90 Park Nicollet Medical Center and the Minnesota Osteopathic Medical Society; Minneapolis, Minnesota

"Introduction to Comprehensive Biomechanical Diagnostics" (40 hours x 3)

Tucson Osteopathic Medical Foundation; Tucson, Arizona 1989-90 "Introduction to Comprehensive Biomechanical Diagnostics" (40 hours x 2)

1990 Sister Kenny Institute; Minneapolis, Minnesota with Warren Bilkey, M.D. "Comprehensive Biomechanical Diagnostics - Intermediate Forum" (16 hours)

June 2023 14 1991 Tucson Osteopathic Medical Foundation; Tucson, Arizona
"Introduction to Comprehensive Biomechanical Diagnostics" (28 hours)

#### **Restorative Care Partners, LLC**

Audience included D.O.s, M.D.s, and O.T.s.

2008 Nova Southeastern University College of Osteopathic Medicine; Fort Lauderdale, Florida

"Introduction to Comprehensive Biomechanical Diagnostics Level 1 – Low Back Pain" (18 hours)

#### **Invited Seminars**

Audiences have included D.O.s, M.D.s, O.T.s, P.T.s, and D.C.s.

Des Moines College of Osteopathic Medicine and the Iowa Osteopathic Medical Society; Des Moines, Iowa
"Comprehensive Osteopathic Manipulation" (2 days)

1999 Western Slopes Study Group; Grand Junction, Colorado
"Restorative Care of Chronic, Tertiary Musculoskeletal Pain Syndromes"
(15 hours)

2004 German School of Osteopathic Medicine - sponsored by the Nova Southeastern University College of Osteopathic Medicine and the Restorative Care Foundation; Fort Lauderdale, Florida

"Introduction to Comprehensive Biomechanical Diagnostics" (17 hours)

2009 German School of Osteopathic Medicine and the German Society for Manual Medicine; Boppard, Germany
"Introduction to Comprehensive Biomechanical Diagnostics - Level I" (20 hours)

#### Other Invited Lecture / Demonstrations

1986 Lecture for the Des Moines College of Osteopathic Medicine and the Iowa Osteopathic Medical Society; Des Moines, Iowa "A D.O. in an M.D. Town"

1986 Lecture / demonstration for the Minnesota Osteopathic Medical Society;
Minneapolis, Minnesota
"Comprehensive Osteopathic Manipulation"

1987-88 Lecture / demonstration series for the Methodist Hospital Orthopedic - Rheumatology Conferences; Minneapolis, Minnesota "Comprehensive Osteopathic Manipulation"

1989	The One and the Many" (Biomechanics and Manual Medicine)
1989	Lecture for the Arizona Osteopathic Medical Association; Tucson, Arizona "OMT and Stroke"
1990	Lecture for the Tucson Holistic Nurses Association; Tucson, Arizona "Biomechanics and Manual Medicine"
1991	Lecture for the Arizona Osteopathic Medical Association; Tucson, Arizona "Somatic Dysfunction - A Critique"
1992	Lecture for the Arizona Physical Therapy Association; Phoenix, Arizona "From Toe to Head - the Biomechanics of Head and Neck Pain"
1992	Lecture for the Western States Osteopathic Convention; Las Vegas, Nevada "A Critique of Somatic Dysfunction - Introducing the Biomechanical Exam"
1992	Lecture for the Complementary Medical Association; Tucson, Arizona "Manual Medicine"
1992	Lecture for the Westview Osteopathic Hospital; Indianapolis, Indiana "A Critique of Current Concepts of Somatic Dysfunction"
1993	Lecture / demonstration for the Western States Osteopathic Convention; Las Vegas, Nevada "Biomechanical Diagnostics - Accessory Motion of the Sacrum"
1993	Lecture for the Tucson Homeopathic Study Group; Tucson, Arizona "My Experiences with Robert Fulford, D.O."
1993	Oregon State Osteopathic Convention; Ashland, Oregon Lecture: "A Critique of Current Concepts of Somatic Dysfunction"
	Workshop: "Introducing the Biomechanical Exam with Reference to the Sacrum and Pelvis"
1993	Lecture / demonstration for the Maricopa Medical Center Department of Anesthesiology; Phoenix, Arizona "An Integrative Medicine Approach to Chronic Pain Management - Biomechanical Considerations"
1994	Lecture / demonstration for the Western States Osteopathic Convention; Las Vegas, Nevada "A Critique of Somatic Dysfunction - Introducing the Biomechanical Exam" (2 hours)

1994	Lecture / demonstration for the Arizona Movement and Balance Laboratories at the Rehabilitation Institute of Tucson; Tucson, Arizona "Introduction to the Biomechanical Evaluation and Manual Medicine" (3 hours)
1994	Lecture / demonstration for the Arizona Academy of Osteopathy; Sedona, Arizona "Diagnosis and Treatment of Sacral Dysfunction" (2 hours)
1995	Publication presentation Association of University Radiologists; San Diego, California  "Ultrasound Evaluation of Sacroiliac Motion in Normal Volunteers" Lund, P., Krupinski, E., Brooks, W.
1996	Lecture / demonstration with John Woolf, PT for the Rocky Mountain Athletic Trainer's Association Symposium; Tucson, AZ "Manual Medicine and the Biomechanical Evaluation" (4 hours)
1996	New Frontiers in Pain 1996 Preconference Workshop on Musculoskeletal Medicine; Scottsdale, Arizona Lecture: "The Musculoskeletal System - Its Function and Malfunction"
	Demonstration: "The Biomechanical Exam"
1996	Lecture for the Southwest Conference on Medicine; Tucson, Arizona "Osteopathic Manipulative Medicine and Managed Care"
1997	Lecture / lab for the Missouri Association of Osteopathic Physicians and Surgeons; Kansas City, Missouri  "General Principles of Diagnosis of the Functional Pathology of the Spine C2 - L5" (2 hours)
1998	Lecture for the Park Lane Medical Center Quarterly Medical Staff Meeting; Raytown, Missouri "Restorative Care of Chronic Musculoskeletal Pain Syndromes"
1999	Lecture for the Community Hospital; Grand Junction, Colorado "Expanding Perspectives on the Diagnosis of the Functional Pathology of the Cervical, Thoracic, and Lumbar Spines"
1999	Lecture for the Western Slopes Study Group; Grand Junction, Colorado "Multidisciplinary Approach to Chronic Pain" (Keynote Speaker)
1999	Lecture / lab for the Kansas Association of Osteopathic Medicine; Overland Park, Kansas "Expanding Perspectives on the Diagnosis of Somatic Dysfunction of the Spine"

2001 Lecture for the Research Medical Center, Bixby Institute 20th Annual Hoeper Primary Care Symposium; Kansas City, Missouri "Manipulative Medicine in the 21st Century" 2001 Lecture for the Truman Medical Center East. Medical Staff and Resident Conference; Kansas City, Missouri "Manipulative Medicine in the 21st Century" Lecture for the Kaufman Foundation; Kansas City, Missouri 2002 "Manipulative Medicine in the 21st Century" 2003 Poster with Mike Patterson, PhD, DO (HON) at the 47th Annual AOA Research Conference: New Orleans, Louisiana "The Effect of Cervical Spine Position on Lumbar and Trunk Forward Bending" 2004 Lecture for Bridging the Gap Between Eastern and Western Medicine; University of Missouri-Kansas City School of Medicine, Children's Mercy Hospital and Clinics, International Institute of Oriental Medicine, Logan College of Chiropractic Medicine, and Kansas College of Chinese Medicine; Kansas City, Missouri "Restorative Care of the Musculoskeletal System" 2004 Lecture for the German School of Osteopathic Medicine sponsored by the Nova Southeastern University College of Osteopathic Medicine and the Restorative Care Foundation; Fort Lauderdale, Florida "The Techniques of Robert Fulford, DO" (3 hours) 2005 First International Congress of Osteopathic Medicine; German Society for Osteopathic Medicine, German American Academy for Osteopathy, Swiss Association for Osteopathic Medicine, French Association for Osteopathic Medicine, Elsevier Publishing: Freiburg, Germany Research Symposium: "Research Projects of the Restorative Care Foundation: Spinal Motion of the Whole Spine and at the Sacroiliac Joint: Chest Wall Mechanics - Compliance; Passive Specified Linkage Motion Testing - Intra / interrater Reliability: Idiopathic Scoliosis" Lecture: "Comprehensive Biomechanical Diagnosis" 2007 Society on Scoliosis Orthopedic and Rehabilitation Treatment; Boston, Massachusetts Lecture: "Comprehensive Manipulative Medicine" (15 minutes)

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Methods"

Poster with Martha Hawes, PhD: "Reversal of Signs and Symptoms of

Longstanding Moderately Severe Idiopathic Scoliosis in Response to Physical

2008 Second International Congress of Osteopathic Medicine; German Society for Osteopathic Medicine, German American Academy for Osteopathy, Swiss Association for Osteopathic Medicine, French Association for Osteopathic Medicine; Karlsruhe, Germany Consultant: "Spinal Mechanics and Dysfunction" (5 hours) Lecture: "Restorative Care of Low Back Pain Syndrome" Lecture: "The Work of Robert Fulford, DO" Workshop: "Restorative Care of Low Back Pain Syndrome" (2 hours x 2) Discussant: 'Ask the Stars' Panel 2009 Lecture for the Teacher's Conference German School of Osteopathic Medicine and the German Society for Manual Medicine; Boppard, Germany "Principles of Examination for Functional Pathology of the Spine" (1.5 hours) 2009 Lecture / demonstration for the United States Army School of Advanced Military Studies: Fort Leavenworth, Kansas "Systems Theory and Restorative Care of Chronic Musculoskeletal Pain Syndromes" (4 hours) 2010 Lecture / demonstration for Proactive Physical Therapy; Tucson, Arizona "Systems Theory and Restorative Care of Chronic Musculoskeletal Pain Syndromes" (3 hours) 2011 Lecture for TOUCH.net; Kansas City, Missouri "Restorative Care of Musculoskeletal Pain Syndromes" (1 hour) 2011 Lecture / lab for the Southwest Conference on Medicine; Tucson, Arizona "OMT Workshop" (2 hours) 2012 Lecture / demonstration for the American Academy of Osteopathy 75<sup>th</sup> Convocation: Louisville, Kentucky "OMT to Reduce Scoliotic Curves" (45 minutes) 2013 Lecture / demonstration for the Division of Child Neurology Faculty and Fellows Tufts University School of Medicine; Boston, Massachusetts "Functional Pathology of the Musculoskeletal System" (1 hour)

#### **Grants**

#### **Completed Support**

Tucson Osteopathic Medical Foundation to Biomechanix (\$5,000) for presentation of a seminar: "Introduction to Comprehensive Biomechanical Diagnostics"

- Tucson Osteopathic Medical Foundation to Biomechanix (\$5,000) for presentation of a seminar: "Introduction to Comprehensive Biomechanical Diagnostics"
- 1993-4 Department of Surgery the University of Arizona (Biomedical Research Support Grant) Principal Investigator (\$2,500): "The Effect of Manual Medicine on Chest Wall Compliance and Spirometrically Measured Pulmonary Function"
- 2002-19 Co-principal Investigator with Michael M. Patterson, PhD, DO (HON) from the Restorative Care Foundation (\$82,000) (\$80,000 from the Wallace Research Foundation)
  - #1 The Functional Pathology of the Musculoskeletal System
  - #2 Review of the controversy regarding the amount of motion that occurs at the sacroiliac joint
  - #3 Effect of cervical forward vs backward bending on lumbar and trunk forward bending in the standing context
  - #4 Chest compliance measured with a sternal displacement meter in normal volunteers
  - #5 Reversal of signs and symptoms in a case of adult idiopathic scoliosis
- 2003-19 Co-principal Investigator with Michael M. Patterson, PhD, DO (HON) from the Restorative Care Foundation (\$75,000) (\$75,000 from the Wallace Research Foundation) continuing support of #1 through #5 and
  - #6 Intraexaminer reliability of the Functional Biomechanical Examination
- 2005-19 Co-principal Investigator with Michael M. Patterson, PhD, DO (HON) from the Restorative Care Foundation (\$75,000) (\$75,000 from the Wallace Research Foundation) continuing support of #1 through #6
- 2018-22 Co-principal Investigator with Brian Degenhardt, DO from the Andrew Taylor Still University (\$25,000) (\$25,000 from the Wallace Research Foundation) publication of <a href="https://example.com/The-Functional Pathology of the Musculoskeletal System">The Functional Pathology of the Musculoskeletal System</a>

#### **Active Support**

2023- Co-investigator with Alan Yee, DO Principle Investigator from the American Osteopathic Association (\$100,000): "Somatic Dysfunction Characterization following Acute Cerebrovascular Disease"

#### **Inactive Support**

- The University of Arizona Arthritis Center Principal Investigator (\$2,500)

  "The Effect of Manual Medicine on Chest Wall Compliance & Spirometrically Measured Pulmonary Functions"
- 1994 Wallace Genetics Foundation Principal Investigator (\$41,260) #1 Fluoroscopic Measurement of Sacroiliac Joint Motion
  - #2 The Effect of Manual Medicine on Chest Wall Compliance and Spirometrically Measured Pulmonary Functions"

#### Publications / Abstracts

- 1995 Krupinski, E., Brooks, W., Lund, P. "Demonstration of Movement in the Sacroiliac Joint Using Ultrasound" SPIE Medical Imaging 1995; Vol. 2433 pp. 354-360
- Lund, P., Krupinski, E., Brooks, W. "Ultrasound Evaluation of Sacroiliac Motion in Normal Volunteers". Acad Radiol 1996; 3: 192-196.
- Brooks, W., Krupinski, E., Lund, P. (Abstract) "Realtime Sonographic Evaluation of Sacroiliac Joint Motion Induced by Spring Testing". The Integrated Function of the Lumbar Spine and Sacroiliac Joint, Second Interdisciplinary World Congress on Low Back Pain Part II. Edited by Vleeming, A., Mooney, V., Dorman, T., Snijders, C. 1995; p. 895.
- Hawes, M., Brooks, W. "Improved Chest Expansion in Idiopathic Scoliosis after Intensive, Multiple-modality, Non-surgical treatment in an Adult". Chest 2001; Vol.120: 672-674.
- Hawes, M., Brooks, W. (Abstract) "Reversal of Signs and Symptoms of Longstanding Moderately Severe Idiopathic Scoliosis in Response to Physical Methods". Research into Spinal Deformities 4. International Research Society of Spinal Deformities. Edited by Grivas, T. 2002; pp.365-8.
- 2003 Brooks, W., Patterson, M., Wagner, E., Shamus, E., Carter, K. (Abstract) "Effect of Cervical Spine Position on Lumbar and Trunk Forward Bending" Journal of the American Osteopathic Association, Vol. 103, No. 8, August, 2003
- Brooks, W., Krupinski, E., Hawes, M. (Abstract) "Reversal of Curvature in Response to Physical Methods: a 15 Year Follow-up in an Adult Female Diagnosed with Moderately Severe Scoliosis at Age Eleven Years" Scoliosis 2007, 2 (Suppl 1): P2 (12 October 2007)
- 2009 Brooks, W. "Limitations of Symmetry" Osteopathic Medicine 1/2009 (German) pp. 11-15.

- Brooks, W. (Book Review) "Manipulation in Motion: A Video Companion to A Pocket Manual of OMT [DVD]" Journal of the American Osteopathic Association, Volume 109, No. 11, November 2009, pp. 571-2.
- Brooks, W., Krupinski, E., Hawes, M. "Reversal of childhood idiopathic scoliosis in an adult, without surgery: a case report and literature review" Scoliosis 2009, **4:**27 doi:10.1186/1748-7161-4-27
- William J. Brooks, Michael M. Patterson, Ethan Wagner, Patrick Hardigan "Cervical Spine Bending: A Factor Confounding Whole Trunk and Lumbar Forward Bending Range of Motion" Journal of the American Osteopathic Association July 2012 112:429-436
- 2018 Degenhardt, B., Johnson, J., Brooks, W., Norman, L. "Adverse Events Reported Immediately Following Osteopathic Manipulative Treatment" The Journal of the American Osteopathic Association, March 2018, Vol. 118, 141-149
- 2022 <u>Functional Pathology of the Musculoskeletal System: Volume One—Introduction.</u>
  William James Brooks, DO. Foreword by David Griesemer, MD
- 2022 Brooks, W, Johnson, J, Degenhardt, B. "Assessment of the Safety of Osteopathic Manipulative Treatment Based on Patient Report: An Observational Study Conducted by DO-Touch.NET" (Abstract) International Consortium on Manual Therapies Conference 2022—Online—May, 2022

#### Research in Progress

- 1995 Brooks, W., Enright, P., Krupinski, E., et al. "Clinical Validation of a Sternal Displacement Meter" data obtained
- 2003 Brooks, W. and Patterson, M. (deceased) "Intraexaminer Reliability of Passive Specified Linkage Range of Motion" IRB approved protocol
- 2005 Degenhardt, B., Johnson, J., Brooks, W. "Patient Reported Adverse Events Following Osteopathic Manipulative Treatment" Funded by the American Academy of Osteopathy and the A.T. Still University Strategic Research Fund, July 2014 to September 2017.
- 2019- Latt, D, Dohm, M., Brooks, W. "Measuring, Understanding, and Improving Changes in Gait and Balance as a Result of Orthopedic Interventions"

#### Manuscripts in Development

- 1999 <u>Functional Pathology of the Musculoskeletal System</u> in 4 volumes:
  - Volume Two: Conceptual Foundations
  - Volume Three: Nomenclature
  - Volume Four: Clinical Application and Research Implications

2018 Degenhardt, B., Johnson, J., Brooks, W. "Adverse Events Reported During the Week Following Osteopathic Manipulative Treatment"

#### **Current Memberships**

Arizona Osteopathic Medical Association American Academy of Osteopathy Cranial Academy Sigma Sigma Phi