

CURRICULUM VITAE

Christopher J. Colloca, D.C.

101 South Roosevelt Avenue
Chandler, AZ 85226
Phone: (480) 785-8448

email: cjcolloca@neuromechanical.com
web: www.neuromechanical.com
Fax: (480) 785-3916

EDUCATION:

| | |
|-------------------------------|---|
| Doctor of Chiropractic (D.C.) | Life College School of Chiropractic Marietta, Georgia September, 1995 <i>Cum Laude</i> |
| Bachelor of Science (B.S.) | Ithaca College Ithaca, New York December, 1990 Major: Exercise Science |
| Graduate Study | State University of New York College at Oswego Oswego, New York - Graduate study towards M.Ed., 1991 Arizona State University Tempe, AZ - Department of Kinesiology – Graduate study M.S., 2002-present, Ph.D., 2008-present |

LICENSURE:

| | |
|----------------------------------|---|
| License to Practice Chiropractic | State of Arizona, License Number ~ 5609 State of New York, License Number ~ 8032 |
| Physiotherapy Certification | State of Arizona, License Number ~ 3246 |

POST-GRADUATE EDUCATIONAL CERTIFICATIONS:

1. Diplomate of the National Board of Chiropractic Examiners
Part I, *March, 1994.*
Parts II, III, and Physiological Therapeutics, *March 1995.*
Part IV, *January, 1996.*
2. National College of Chiropractic, Lombard, IL
Physiological Therapeutics, 120 hr. Certification, **Atlanta, GA, Dec 10-22, 1994**

EMPLOYMENT:

| | |
|----------------------------------|--|
| CEO and Founder | Neuromechanical Innovations 11011 South 48th Street, Suite 205 Phoenix, AZ 85044 (480) 785-8442 Fax: (480) 893-2412 <i>2000-Present</i> |
| President and Clinic Director | State of the Art Chiropractic Center 11011 South 48th Street, Suite 220 Phoenix, AZ 85044 (480) 893-2400 Fax: (480) 893-2412 <i>April 1, 1997 – May 10, 2008</i> |
| Vice President | Activator Methods International, Ltd. 3714 East Indian School Road Phoenix, AZ 85018 (602) 224-0220 Fax: (602) 224-0230 <i>January 1, 1997 – June 27, 2000</i> |

FACULTY APPOINTMENTS:

| | |
|--|---|
| Postdoctoral & Related Professional Education Department Faculty | Logan College of Chiropractic St. Louis, MO, U.S.A., <i>1997-Present</i> New York Chiropractic College Seneca Falls, NY, U.S.A., <i>1998-Present</i> Life University Marietta, GA, U.S.A., <i>2000-Present</i> Palmer College of Chiropractic Davenport, IA, U.S.A., <i>2002-Present</i> |
| Team Speaker | Parker School for Professional Success Dallas, TX, U.S.A., <i>1997-Present</i> |
| External Examiner of Dissertations | Department of Chiropractic, Durban Institute of Technology, Durban, South Africa, <i>2003-Present</i> |

PROFESSIONAL APPOINTMENTS:

| | |
|----------------------------------|---|
| Editorial Advisory Board | <i>The Open Spine Journal</i> Bentham Science Publishers, ISSN:1876-5327 2008 – present |
| Reviewer | <i>Spine</i> Lippincott Williams & Wilkins, Philadelphia, PA, 2005 – present |
| | <i>European Spine Journal</i> Springer-Verlag, Berlin, Germany 2005 – present |
| | <i>Journal of Biomechanics</i> Elsevier, Ltd., New York, NY 2005 – present |
| | <i>Chiropractic & Osteopathy</i> , BioMed Central, London, UK 2006 – present |
| | <i>BMC Musculoskeletal Disorders</i> BioMed Central, London, UK 2008 – present |
| | <i>Journal of Manipulative and Physiological Therapeutics</i> Elsevier, Ltd., New York, NY 2008 – present |
| | <i>Clinical Biomechanics</i> Elsevier, Ltd., New York, NY 2009 – present |
| Fellowship Committee | International Society for the Study of the Lumbar Spine, 2007 - present |
| Chair, Publications Committee | Arizona Association of Chiropractic Phoenix, AZ, U.S.A., 1997-2001 |
| Board of Directors | National Institute of Chiropractic Research Phoenix, AZ, U.S.A., 1998-2001 |

PROFESSIONAL SOCIETY MEMBERSHIPS

1. International Chiropractors Association, *1991-Present*
2. American Chiropractic Association, *1995-Present*
3. Chiropractic Biophysics, Non-Profit, Inc., *1996-Present*
4. Arizona Association of Chiropractic, *1997-2001; 2006-Present*
5. Foundation for Chiropractic Education & Research, *2000-Present*
6. World Federation of Chiropractic, *2002-Present*
7. International Society for the Study of the Lumbar Spine, *2004-Present*
8. Life University President's Circle, *2005-Present*
9. Arizona Chiropractic Society, *2006-Present*
10. New York Chiropractic College, President's Council, *2009-Present.*
11. National Institute of Chiropractic Research, *1994-2001*
12. Georgia Chiropractic Association, *1994-1995*
13. Georgia Council of Chiropractic, *1995*
14. New York State Chiropractic Association, *1996*
15. New York Chiropractic Council, *1996*

SCIENTIFIC CONFERENCE INVITED CHAIRMAN / MODERATOR

1. Spineweek 2008. 35th Annual Meeting of the *International Society for the Study of the Lumbar Spine*. Chairman, Special Poster Session I: Muscle. **Geneva, Switzerland, May 29, 2008.**
2. 34th Annual Meeting of the *International Society for the Study of the Lumbar Spine*. Moderator, Special Poster Session I: Low Back Pain. **Hong Kong, June 10-14, 2007.**

SCIENTIFIC CONFERENCE ATTENDANCE/PARTICIPATION

1. *XVIth Brussels International Spine Symposium*. **Brussels, Belgium, November 20-21, 2009.**

2. ECU2009 European Chiropractors' Union Convention. **Alghero, Sardinia, Italy, May 21-23, 2009.**
3. 36th Annual Meeting of *the International Society for the Study of the Lumbar Spine*, **Miami, FL, May 4-8, 2009.**
4. 10th Biennial Congress of the *World Federation of Chiropractic*. **Montreal, Quebec, Canada, April 30 – May 2, 2009.**
5. The Association of Chiropractic Colleges - Research Agenda Conference 2009. Tuscany Suites and Casino, **Las Vegas, NV, March 12-14, 2009.**
6. Spineweek 2008. 35th Annual Meeting of the *International Society for the Study of the Lumbar Spine*. **Geneva, Switzerland, May 26-31, 2008.**
7. 2008 Annual Scientific Meeting of the *Spine Society of Australia*, The Hilton Adelaide, **Adelaide, Australia, April 18-20, 2008.**
8. The Association of Chiropractic Colleges - Research Agenda Conference 2008. Sheraton Premiere at Tyson's Corner, **Washington, DC, March 13-15, 2008.**
9. *XIVth Brussels International Spine Symposium*. Surgery for Low Back Pain? Controversies in Etiopathogenesis, Management and Costs. **Brussels, Belgium, November 16-17, 2007.**
10. 34th Annual Meeting of the *International Society for the Study of the Lumbar Spine*. **Hong Kong, China, June 10-14, 2007.**
11. 9th Biennial Congress of the *World Federation of Chiropractic, International Conference on Chiropractic Research*, Tivoli Marinotel, **Vilamoura, Portugal, May 17-19, 2007.**
12. The Association of Chiropractic Colleges XIV / Research Agenda Conference XII. Professionalism and Ethics. Wyndham Phoenix, **Phoenix, AZ, March 15-17, 2007.**
13. International Chiropractors Association's 4th International Symposium on the Philosophy, Art and Science of Chiropractic. The Westin Palace Hotel, **Madrid, Spain, October 6-8, 2006.**
14. 2006 Conference on Chiropractic Research. Foundation for Chiropractic Education and Research, **Chicago, IL, September 14-16, 2006.**
15. 33rd Annual Meeting of the International Society for the Study of the Lumbar Spine, **Bergen, Norway, June 13-17, 2006.**
16. 52nd Annual Meeting of the *Orthopaedic Research Society*, **Chicago, IL, March 19-22, 2006.**

17. The Association of Chiropractic Colleges XIII / Research Agenda Conference XI. Sheraton Premiere at Tyson's Corner, **Washington, DC**, *March 16-18, 2006*.
18. 8th Biennial Congress of the World Federation of Chiropractic, International Conference on Chiropractic Research, Sydney Convention Centre, **Sydney, Australia**, *June 16-18, 2005*.
19. 32nd Annual Meeting of the International Society for the Study of the Lumbar Spine, **New York, NY, USA**, *May 11-14, 2005*.
20. The Association of Chiropractic Colleges XII / Research Agenda Conference X. Alexis Park Hotel, **Las Vegas, NV, USA**, *March 17-19, 2005*.
21. Spineweek 2004. 31st Annual Meeting of the International Society for the Study of the Lumbar Spine, **Porto, Portugal**, *June 1-5, 2004*.
22. The Association of Chiropractic Colleges XI / Research Agenda Conference IX: Best Practices. Alexis Park Hotel, **Las Vegas, NV, USA**, *March 11-14, 2004*.
23. 30th Annual Meeting of the International Society for the Study of the Lumbar Spine, **Vancouver, British Columbia, Canada**, *May 13-17, 2003*.
24. 7th Biennial Congress of the World Federation of Chiropractic, Hilton Disney World Resort, **Orlando, FL**, *May 1-3, 2003*.
25. Association of Chiropractic Colleges X/Research Agenda Conference VIII: Diversity. Omni Royal Orleans, **New Orleans, LA, USA**, *March 13-16, 2003*.
26. 29th Annual Meeting of the International Society for the Study of the Lumbar Spine. Renaissance Cleveland Hotel, **Cleveland, OH, USA**, *May 14-18, 2002*.
27. Association of Chiropractic Colleges IX/Research Agenda Conference VII: Faculty and Personnel Development: The Power of Human Potential. Omni Royal Orleans, **New Orleans, LA, USA**, *March 13-16, 2002*.
28. Research Agenda Conference VI: Advancing the Science of Chiropractic. Hyatt Regency Crown Center, **Kansas City, MO, USA**, *July 27-29, 2001*.
29. 6th Biennial Congress of the World Federation of Chiropractic, Palais des Congrès, **Paris, France**, *May 24-26, 2001*.
30. 2000 International Conference on Spinal Manipulation, **Bloomington, MN, USA**, *September 21-23, 2000*.
31. 12th Conference of the European Society of Biomechanics. Trinity College, **Dublin, Ireland**, *August 27-30, 2000*.
32. Research Agenda Conference IV: Chiropractic Research: Implications for

- Practice, Policy, and Professional Development. **Chicago, IL, USA, July 23-25, 1999.**
33. 26th Annual Meeting of the International Society for the Study of the Lumbar Spine. **Kona, HI, USA, June 20-24, 1999.**
 34. 25th Annual Meeting of the International Society for the Study of the Lumbar Spine. **Brussels, Belgium, June 9-13, 1998.**
 35. International Symposium on Degeneration of the Lumbar Functional Spinal Unit and Physiopathology of Low-Back Pain. **Paris, France, June 6, 1998.**
 36. 23rd Annual Meeting of the International Society for the Study of the Lumbar Spine. **Burlington, VT, USA, June 25-29, 1996.**

INTELLECTUAL PROPERTY - PATENTS:

1. Colloca CJ, Keller TS. Improved Electromechanical Adjusting Instrument (Patent Pending).
2. Colloca CJ, Keller TS. Electromechanical Adjusting Instrument. United States Patent #7,144,417. *December 5, 2006.*
3. Colloca CJ, Keller TS, Fuhr AW. Neuromuscular reflex assessment method. United States Patent #6,480,735. *November 12, 2002.*

INTELLECTUAL PROPERTY - TRADEMARKS:

1. Impulse Adjusting Technique[™]. United States Trademark (Pending)
2. Impulse iQ Adjusting Instrument[®] Logo. United States Trademark #3,665,972. *August 11, 2009.*
3. Instrument Adjusting Headquarters[®]. United States Trademark #3,623,480. *May 19, 2009.*
4. Certified Instrument Adjuster[®]. United States Trademark #3,589,270. *March 10, 2009.*
5. Adjust to the Frequency[®]. United States Trademark #3,549,016. *December 23, 2008.*
6. Intelli-Adjust[®]. United States Trademark #3,478,082. *July 29, 2008.*
7. Impulse IQ[®]. United States Trademark #3,469,684. *July 15, 2008.*
8. The Neuromechanical System[®]. United States Trademark #3,393,653. *March 4,*

2008.

9. Auto-Sense®. United States Trademark #3,390,045. *February 26, 2008.*
10. 21st Century Chiropractic®. United States Trademark #3,157,687. *October 17, 2006.*
11. Experience The Next Generation in Chiropractic®. United States Trademark #3,017,950. *November 22, 2005.*
12. Impulse Adjusting Instrument®. United States Trademark #3,013,309. *November 8, 2005.*
13. Impulse Adjusting Instrument® (design). United States Trademark #3,013,310. *November 8, 2005.*
14. Solutions for Today's Patient Management®. United States Trademark #2,693,868. *March 4, 2003.*
15. Neuromechanical Innovations®. United States Trademark #2,630,813. *October 8, 2002.*

HONORS & AWARDS:

1. Best Paper Award (\$500.00) - International Chiropractors Association 4th International Symposium on the Philosophy, Art and Science of Chiropractic. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE. Altered Spinal Motion Patterns and Neurophysiological Responses Associated With Intervertebral Disc Degeneration During Chiropractic Adjustments. The Westin Palace Hotel, Madrid, Spain, October 6-8, 2006.
2. Researcher of the Year, Chiropractic Biophysics, 2005.
3. The Scott Haldeman Award (\$7,000) – 1st Prize, International Free Paper Competition for Research Titled, Biomechanical and Neurophysiological Responses to Spinal Manipulation in Patients with Lumbar Radiculopathy (Colloca CJ, Keller TS, Gunzburg R). 7th Biennial Congress of the World Federation of Chiropractic, Orlando, FL, *May 1-3, 2003*
4. Sofomar-Danek Award (\$1,500) for Best Poster Presentation, (Keller TS, Harrison DE, Colloca CJ, Harrison DD, Janik TJ. Prediction of Spinal Deformity Following Disc Degeneration and Osteoporosis.) 30th Annual Meeting of the International Society for the Study of the Lumbar Spine, 2002
5. Eagle Award, Activator Methods Highest Achievement, Activator Methods, Inc., 1998
6. *Cum Laude* Graduate of Life College School of Chiropractic, 1995

7. Chiropractic Biophysics Research Award, 1995
8. Ithaca College Varsity Football Co-Captain, 1990
9. Champion[®] Division III Football All-American, 1990
10. Football Gazette All-American, 1990
11. ECAC Defensive Football Player of the Week, *September, 29, 1990*
12. ECAC Upstate New York Division III All Star Football Team Selection, 1990
13. Member, Division III National Championship Football Team, Ithaca College, 1988
14. Ithaca College Scholarship Award, 1986-1990
15. Richard Lyon Memorial Scholarship Award, Ithaca College, 1990
16. Ithaca College Alumni Scholarship Award, 1988-1990
17. Rotary International Club Scholarship Award, Oswego, NY, 1986
18. Second Degree Black Belt, Okinawan Go-ju Ryu Karate, State University of New York College at Oswego Karate School, Oswego, NY, 1986

REFERREED PEER-REVIEWED PUBLICATIONS:

1. Colloca CJ, Keller TS, Moore RJ, Harrison DE, Gunzburg R. Validation of a Non-Invasive Dynamic Spinal Stiffness Assessment Methodology in an Animal Model of Intervertebral Disc Degeneration. *Spine* 2009; 34(18):1900-5.
2. Colloca CJ, Cunliffe C, Pinnock MH, Kim YK, Hinrichs R. Force-Time Profile Characterization of the McTimoney Toggle-Torque-Recoil Technique. *Journal of Manipulative and Physiological Therapeutics* 2009; 32(5):372-8.
3. Gunzburg R, Szpalski M, Callary SA, Colloca CJ, Kosmopoulos, V, Harrison DE, Moore RJ. Effect of a novel interspinous implant on lumbar spinal range of motion. *European Spine Journal* 2009; 18(5):696-703. Epub 2009 Feb 7.
4. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE. Effects of disc degeneration on neurophysiological responses during dorsoventral mechanical excitation of the ovine lumbar spine. *Journal of Electromyography and Kinesiology* 2008;18(5):829-37.
5. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE. Intervertebral disc degeneration reduces vertebral motion responses. *Spine* 2007; 32(19):E544-50.
6. Keller TS, Colloca CJ, Harrison DE, Moore RJ, Gunzburg R. Muscular contributions to dynamic dorsoventral lumbar spine stiffness. *European Spine Journal* 2007; 16(2):245-54.
7. Colloca CJ, Keller TS. Spinal manipulation reduces pain and hyperalgesia after lumbar intervertebral foramen inflammation in the rat [Letter]. *Journal of Manipulative and Physiological Therapeutics* 2007; 30(1):76-7.
8. Keller TS, Colloca CJ. Dynamic dorsoventral stiffness assessment of the ovine lumbar spine. *Journal of Biomechanics* 2007; 40(1):191-7.
9. Keller TS, Colloca CJ, Moore RJ, Gunzburg R, Harrison DE. Increased multiaxial lumbar motion responses during multiple-impulse mechanical force manually assisted spinal manipulation. *Chiropractic & Osteopathy* 2006; 14(1):6-14.
10. Keller TS, Colloca CJ, Moore RJ, Gunzburg R, Harrison DE, Harrison DD. Three-dimensional intersegmental motion validation of mechanical force spinal manipulation. *Journal of Manipulative and Physiological Therapeutics* 2006; 29(6):425-36.
11. Colloca CJ, Keller TS, Harrison DE, Moore RJ, Gunzburg R, Harrison DD. Spinal manipulation force and duration affect vertebral movement and neuromuscular responses. *Clinical Biomechanics* 2006; 21(3):254-62.
12. Harrison DE, Betz JW, Cailliet R, Harrison DD, Haas JW, Colloca CJ, Janik TJ. Radiographic pseudoscoliosis in healthy male subjects following voluntary lateral

- translation (side glide) of the thoracic spine. ***Archives of Physical Medicine and Rehabilitation*** 2006; 87(1):117-22.
13. Colloca CJ, Hinrichs RN. The biomechanical and clinical significance of the lumbar erector spinae flexion-relaxation phenomenon: a review of the literature. ***Journal of Manipulative and Physiological Therapeutics*** 2005; 28(8):623-31.
 14. Shearar KA, Colloca CJ, White HL. A randomized clinical trial of manual versus mechanical force manipulation in the management of sacroiliac joint syndrome. ***Journal of Manipulative and Physiological Therapeutics*** 2005; 28(7):493-501.
 15. Colloca CJ, Keller TS, Black P, Normand MC, Harrison DE, Harrison DD. Biomechanical comparison of mechanical force manually assisted chiropractic adjusting instruments. ***Journal of Manipulative and Physiological Therapeutics*** 2005; 28(6):414-22.
 16. Harrison DE, Colloca CJ, Harrison DD, Janik TJ, Haas JW, Keller TS. Anterior thoracic posture increases thoracolumbar disc loading. ***European Spine Journal*** 2005; 14:234-45.
 17. Harrison DE, Cailliet R, Betz JW, Harrison DD, Colloca CJ, Haas JW, Janik TJ. A Non-randomized Clinical Control Trial of Harrison Mirror Image Methods for Correcting Trunk List (Lateral Translations of the Thoracic Cage) in Patients With Chronic Low Back Pain. ***European Spine Journal*** 2005; 14:155-62.
 18. Keller TS, Colloca CJ, Harrison DE, Harrison DD, Janik TJ. Influence of spine morphology on intervertebral disc loads and stresses in asymptomatic adults. ***The Spine Journal*** 2005; 5:297-309.
 19. Taylor SH, Arnold ND, Biggs L, Colloca CJ, Mierau DR, Symons BP, Triano JJ. A review of the literature pertaining to the efficacy, safety, educational requirements, uses and usage of mechanical adjusting devices. Part 2 of 2. ***Journal of the Canadian Chiropractic Association*** 2004; 48(2):152-61.
 20. Taylor SH, Arnold ND, Biggs L, Colloca CJ, Mierau DR, Symons BP, Triano JJ. A review of the literature pertaining to the efficacy, safety, educational requirements, uses and usage of mechanical adjusting devices. Part 1 of 2. ***Journal of the Canadian Chiropractic Association*** 2004; 48(1):74-88.
 21. Colloca CJ, Keller TS. Active trunk extensor contributions to dynamic posteroanterior lumbar spinal stiffness. ***Journal of Manipulative and Physiological Therapeutics*** 2004; 27(4): 229-37.
 22. Colloca CJ, Keller TS, Gunzburg R. First Prize – Biomechanical and neurophysiological responses to spinal manipulation in patients with lumbar radiculopathy. ***Journal of Manipulative and Physiological Therapeutics*** 2004; 27(1):1-15.

23. Colloca CJ, Keller TS, Gunzburg R. Neuromechanical characterization of in vivo lumbar spinal manipulation. Part II: Neurophysiological Response. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(9):579-91.
24. Keller TS, Colloca CJ, Gunzburg R. Neuromechanical characterization of in vivo lumbar spinal manipulation. Part I: Vertebral motion. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(9):567-78.
25. Colloca CJ, Polkinghorn BS. Chiropractic management of Ehlers-Danlos Syndrome – A report of 2 cases. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(7):448-59.
26. Roy AL, Keller TS, Colloca CJ. Posture dependent isometric trunk strength and EMG activity in normal male and female subjects. ***Journal of Electromyography & Kinesiology*** 2003; 13(5):469-76.
27. Colloca CJ, Keller TS, Peterson TK, Seltzer DE. Comparison of dynamic posteroanterior spinal stiffness to plain film radiographic images of lumbar disc height. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(4):233-41.
28. Harrison DE, Harrison DD, Betz JJ, Janik TJ, Holland B, Colloca CJ, Haas JW. Increasing the cervical lordosis with seated combined extension-compression and transverse load cervical traction with cervical manipulation: non-randomized clinical control trial. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(3):139-51.
29. Keller TS, Harrison DE, Colloca CJ, Harrison DD, Janik TJ. Prediction of osteoporotic spinal deformity. ***Spine*** 2003; 28(5):455-62.
30. Polkinghorn BS, Colloca CJ. Chiropractic management of chest pain utilizing mechanical force, manually-assisted short lever adjusting procedures. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(2):108-15.
31. Harrison DE, Harrison DD, Colloca CJ, Betz JJ, Janik TJ, Holland B. Repeatability over time of posture, x-ray positioning, and x-ray line drawing: an analysis of six control groups. ***Journal of Manipulative and Physiological Therapeutics*** 2003; 26(2):87-98.
32. Keller TS, Colloca CJ. A rigid body model of the dynamic posteroanterior motion response of the human lumbar spine. ***Journal of Manipulative and Physiological Therapeutics*** 2002; 25(8):485-96.
33. Keller TS, Colloca CJ, Beliveau JG. Force-deformation response of the lumbar spine: a sagittal plane model of manipulation and mobilization. ***Clinical Biomechanics*** 2002; 17(3):185-96.
34. Polkinghorn BS, Colloca CJ. Chiropractic treatment of postsurgical neck syndrome utilizing mechanical force, manually-assisted short lever spinal

- adjustments. ***Journal of Manipulative and Physiological Therapeutics*** 2001; 24(9):589-95.
35. Colloca CJ, Keller TS. Stiffness and neuromuscular reflex response of the human spine to dynamic posteroanterior manipulative thrusts in patients with low back pain. ***Journal of Manipulative and Physiological Therapeutics Ther*** 2001; 24(8):489-500.
36. Colloca CJ, Keller TS. Electromyographic reflex responses to mechanical force, manually assessed spinal manipulative therapy. ***Spine*** 2001; 26(10):1117-24.
37. Wood TG, Colloca CJ, Matthews R. A pilot randomized clinical trial on the relative effect of instrumental versus manual thrust manipulation in the treatment of cervical spine dysfunction. ***Journal of Manipulative and Physiological Therapeutics*** 2001; 24(4):260-71.
38. Keller TS, Colloca CJ. Mechanical force spinal manipulation increases trunk muscle strength assessed by electromyography: a comparative clinical trial. ***Journal of Manipulative and Physiological Therapeutics*** 2000: 23(9):585-95.
39. Keller TS, Colloca CJ, Fuhr AW. *In Vivo* Transient Vibration Analysis of the Normal Human Thoracolumbar Spine. ***Journal of Manipulative and Physiological Therapeutics*** 2000: 23(8):521-30.
40. Colloca CJ, Keller TS, Gunzburg R, Van de Putte K, Fuhr AW. Neurophysiological response to intraoperative lumbosacral spinal manipulation. ***Journal of Manipulative and Physiological Therapeutics*** 2000: 23(7):447-57.
41. Polkinghorn BS, Colloca CJ. Chiropractic treatment of coccygodynia via instrumental adjusting procedures using activator methods chiropractic technique. ***Journal of Manipulative and Physiological Therapeutics*** 1999; 22(6):411-6.
42. Keller TS, Colloca CJ, Fuhr AW. Validation of the force and frequency characteristics of the Activator[®] Adjusting Instrument: effectiveness as a mechanical impedance measurement tool. ***Journal of Manipulative and Physiological Therapeutics*** 1999: 22(2):75-86.
43. Colloca CJ. Commentary: Motion palpation: It's time to accept the evidence [Letter]. ***Journal of Manipulative and Physiological Therapeutics*** 1999; 22(3):184-91.
44. Harrison DD, Colloca CJ, Troyanovich SJ, Harrison DE. Torque misuse revisited. ***Journal of Manipulative and Physiological Therapeutics*** 1998; 21(9):649-55.
45. Polkinghorn BS, Colloca CJ. Treatment of symptomatic lumbar disc herniation utilizing Activator Methods Chiropractic Technique. ***Journal of Manipulative and Physiological Therapeutics*** 1998; 21(3):187-96.

46. Colloca CJ, Fuhr AW. Movements of vertebrae during manipulative thrusts to unembalmed human cadavers [Letter]. *Journal of Manipulative and Physiological Therapeutics* 1998; 21(2):128-9.
47. Colloca CJ, Fuhr AW. Safety in Chiropractic Practice. Part II: Treatment to the upper neck and the rate of cerebrovascular incidents [Letter]. *Journal of Manipulative and Physiological Therapeutics* 1997; 20(8):567-8.
48. Harrison DD, Janik TJ, Troyanovich SJ, Harrison DE, Colloca CJ. Evaluations of the assumptions used to derive an ideal normal cervical spine model. *Journal of Manipulative and Physiological Therapeutics* 1997; 20(4):246-56.
49. Harrison DD, Colloca CJ, Troyanovich SJ, Harrison DE. Torque: An Appraisal of Misuse of Terminology in Chiropractic Literature and Technique. *Journal of Manipulative and Physiological Therapeutics* 1996; 19(7):454-62.

REFERREED PEER-REVIEWED PUBLICATIONS (IN REVIEW):

PUBLISHED CONFERENCE PROCEEDINGS:

1. Colloca CJ, Kosmopoulos V, Gunzburg R, Moore RJ. The Effect of Applied Spinal Manipulation Force Vector on Resultant Vertebral Accelerations: An *In Vivo* Animal Model 2009. Proceedings of the ECU2009 European Chiropractors' Union Convention. **Alghero, Sardinia, Italy, May 21-23.**
2. Gunzburg R, Kosmopoulos V, Moore RJ, Colloca CJ, Callary SA, Szpalski M. Effectiveness of an interspinous implant on restoring dorsoventral lumbar spine stiffness. Proceedings of the 36th Annual Meeting of the International Society for the Study of the Lumbar Spine, **Miami, FL, May 4-8, 2009:30.**
3. Colloca CJ, Cunliffe C, Pinnock M, Kim YK, Hinrichs RN. Force-time profile characterization of the McTimoney Toggle Torque-Recoil Technique. Proceedings of the Association of Chiropractic Colleges XVI / Research Agenda Conference XIV. **Las Vegas, NV, March 12-14, 2009. Journal of Chiropractic Education** 2009; 23(1):63.
4. Colloca CJ, Keller TS, Gunzburg R, Moore R, Harrison DE. Muscular recovery of in vivo lumbar spine stiffness following ligamentous injury in an ovine model. Proceedings of Spineweek 2008. 35th Annual Meeting of the International Society for the Study of the Lumbar Spine, **Geneva, Switzerland, May 26-31, 2008; AB109:89**
5. Gunzburg R, Szpalski M, Moore RJ, Callary SA, Colloca CJ, Harrison DE, Kosmopoulos V. Effect on intervertebral motion of a novel minimally invasive

- interspinous implant. *Proceedings of the 2008 Annual Scientific Meeting of the Spine Society of Australia, Adelaide, Australia*, April 18-20, 2008.
6. Keller TS, Colloca CJ, Harrison DE, Moore RJ, Gunzburg R, Harrison DD, Dier J. Dorsoventral loading and stiffness of the lumbar spine: an ovine model. *Proceedings of the 34th Annual Meeting of the International Society for the Study of the Lumbar Spine, Hong Kong, China* June 10-14, 2007:50.
 7. Harrison DE, Keller TS, Harrison DD, Janik TJ, Colloca CJ. Pelvic morphology affects the sagittal plane alignment of the lumbo-pelvic spine in normal subjects and low back pain patients. *Proceedings of the 34th Annual Meeting of the International Society for the Study of the Lumbar Spine, Hong Kong, China*, June 10-14, 2007:148.
 8. Colloca CJ, Keller TS, Kim YK, Afifi M, Hinrichs RN. Accuracy and inter-examiner reliability of digital motion x-ray analysis of the cervical spine. *Proceedings of the 9th Biennial Congress of the World Federation of Chiropractic, International Conference on Chiropractic Research, Vilamoura, Portugal*, May 17-19, 2007:325-6.
 9. Colloca CJ, Keller TS, Gunzburg R, Moore RJ, Harrison DE. Muscle stimulation can restore lumbar spine stiffness following joint injuries: an in vivo biomechanical study. *Proceedings of the 9th Biennial Congress of the World Federation of Chiropractic, International Conference on Chiropractic Research, Vilamoura, Portugal*, May 17-19, 2007:129-30.
 10. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE. Altered Spinal Motion Patterns and Neurophysiological Responses Associated With Intervertebral Disc Degeneration During Chiropractic Adjustments. *Proceedings of the International Chiropractors Association 4th International Symposium on the Philosophy, Art and Science of Chiropractic*. The Westin Palace Hotel, **Madrid, Spain**, October 6-8, 2006.
 11. Colloca CJ, Keller TS, Moore RJ, Harrison DE, Gunzburg R. Validation of a non-invasive dynamic spinal stiffness assessment methodology in an animal model of intervertebral disc degeneration. *Proceedings of the 2006 Conference on Chiropractic Research*. Foundation for Chiropractic Education and Research. Hotel Sofitel, **Chicago, IL**, September 14-16, 2006.
 12. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE, Harrison DD. Neuromuscular and vertebral motion responses are reduced by intervertebral disc degeneration. *Proceedings of the 33rd Annual Meeting of the International Society for the Study of the Lumbar Spine, Bergen, Norway*, June 13-17, 2006:245.
 13. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE, Harrison DD. Vertebral motion responses are altered by force-time profiles and disc degeneration. In: *52nd Annual Meeting of the Orthopaedic Research Society, Chicago, IL*, March 19-22, 2006, Transactions 31:1221.

14. Colloca CJ, Keller TS, Harrison DE, Moore RJ, Gunzburg R, Harrison DD. Neuromuscular contributions to dynamic posteroanterior spinal stiffness. Proceedings of the *Association of Chiropractic Colleges XIII / Research Agenda Conference XI*. **Washington, DC**, March 16-18, 2006. *Journal of Chiropractic Education* 2006; 20(1):6.
15. Keller TS, Colloca CJ, Moore RJ, Gunzburg R, Harrison DE, Harrison DD. Three-dimensional intersegmental motion validation of mechanical force spinal manipulation. Proceedings of the *Association of Chiropractic Colleges XIII / Research Agenda Conference XI*. **Washington, DC**, March 16-18, 2006. *Journal of Chiropractic Education* 2006; 20(1):26.
16. Colloca CJ, Keller TS, Moore RJ, Gunzburg R, Harrison DE, Harrison DD. Experimentally induced disc degeneration reduces vertebral motions and neuromuscular responses during lumbar spinal manipulation: an animal model. *8th Biennial Congress of the World Federation of Chiropractic, International Conference on Chiropractic Research*, **Sydney, Australia**, June 16-18, 2005:171-3.
17. Colloca CJ, Keller TS, Harrison DE, Moore RJ, Gunzburg R, Harrison DD. Neuromuscular contributions to dynamic posteroanterior lumbar spinal stiffness. In: Proceedings of the *32nd Annual Meeting of the International Society for the Study of the Lumbar Spine*, **New York, NY**, May 10-14, 2005:144.
18. Keller TS, Colloca CJ, Harrison DE, Moore RJ, Gunzburg R, Harrison DD. Frequency dependence of dynamic posteroanterior spinal stiffness. In: Proceedings of the *32nd Annual Meeting of the International Society for the Study of the Lumbar Spine*, **New York, NY**, May 10-14, 2005:168.
19. Harrison DE, Keller TS, Betz JW, Colloca CJ, Haas JW, Harrison DD, Janik TJ. Radiographic and biomechanical analysis of patients with low back pain: a prospective clinical trial. In: Proceedings of the *32nd Annual Meeting of the International Society for the Study of the Lumbar Spine*, **New York, NY**, May 10-14, 2005:162.
20. Harrison DE, Cailliet R, Betz JW, Harrison DD, Colloca CJ, Haas JW, Janik TJ, Holland B. A non-randomized clinical control trial of Harrison mirror image methods for correcting trunk list (lateral translations of the thoracic cage) in patients with chronic low back pain. In: Proceedings of the *32nd Annual Meeting of the International Society for the Study of the Lumbar Spine*, **New York, NY**, May 10-14, 2005:161.
21. Colloca CJ, Keller TS, Harrison DE, Moore RJ, Gunzburg R. Effect of spinal manipulation speed and force on vertebral movement and neuromuscular response. In: Proceedings of the *Association of Chiropractic Colleges XII / Research Agenda Conference X*. **Las Vegas, NV**, March 17-19, 2005. *Journal of Chiropractic Education* 2005; 19(1):4.

22. Harrison DE, Betz JW, Cailliet R, Harrison DD, Haas JW, Colloca CJ, Janik TK. Production of radiographic lumbar pseudoscoliosis from lateral thoracic cage translation posture (trunk list). In: Proceedings of the *Association of Chiropractic Colleges XII / Research Agenda Conference X*. **Las Vegas, NV**, March 17-19, 2005. *Journal of Chiropractic Education* 2005; 19(1):15.
23. Keller TS, Colloca CJ, Harrison DE, Harrison DD, Janik TJ. Influence of spine morphology on intervertebral disc loads and stresses in asymptomatic adults. Implications for the ideal spine. In: Proceedings of the *Association of Chiropractic Colleges XII / Research Agenda Conference X*. **Las Vegas, NV**, March 17-19, 2005. *Journal of Chiropractic Education* 2005; 19(1):62-3.
24. Shearar KA, Colloca CJ, White HL. A randomized clinical trial of the relative effectiveness of manual versus mechanical force spinal manipulation in the management of sacroiliac joint syndrome. In: Proceedings of the *Association of Chiropractic Colleges XI / Research Agenda Conference IX*. **Las Vegas, NV**, March 11-14, 2004. *Journal of Chiropractic Education* 2004; 18(1):29.
25. Harrison DE, Colloca CJ, Betz JW, Cailliet R, Harrison DD, Janik TJ. Appearance of Pseudo-Scoliosis in Lateral Thoracic Translation Posture (Trunk List). In: Proceedings of the *30th Annual Meeting of the International Society for the Study of the Lumbar Spine*, **Vancouver, British Columbia, Canada**, May 13-17, 2003:302.
26. Keller TS, Colloca CJ, Harrison DE, Harrison DD, Janik TJ. Morphological and biomechanical modeling of the thoracolumbar spine: Implications for the ideal spine. In: Proceedings of the *30th Annual Meeting of the International Society for the Study of the Lumbar Spine*, **Vancouver, British Columbia, Canada**, May 13-17, 2003:152.
27. Colloca CJ, Keller TS, Gunzburg R. Biomechanical and Neurophysiological Responses to Spinal Manipulation in Patients With Lumbar Radiculopathy. In: *Proceedings of the 7th Biennial Congress of the World Federation of Chiropractic*, **Orlando, FL**, May 1-3, 2003:218-20.
28. Harrison DE, Harrison DD, Betz JJ, Janik TJ, Holland B, Colloca CJ, Haas JW. Increasing the Cervical Lordosis with CBP Seated Combined Extension-Compression and Transverse Load Cervical Traction with Cervical Manipulation: Non-randomized Clinical Control Trial. In: Proceedings of the *Association of Chiropractic Colleges / Research Agenda Conference VIII*. **New Orleans, LA**, March 13-16, 2003. *Journal of Chiropractic Education* 2003; 17(1):60.
29. Keller TS, Harrison DE, Colloca CJ, Harrison DD, Janik TJ. Prediction of Spinal Deformity Following Disc Degeneration and Osteoporosis. In: Proceedings of the *30th Annual Meeting of the International Society for the Study of the Lumbar Spine*, **Cleveland, OH**. Toronto: ISSLS; 2002:95.
30. Harrison DE, Colloca CJ, Keller TS, Harrison DE, Janik TJ. Prediction of sagittal plane loads and stresses in the lumbar spine. A comparison of neutral posture

- and anterior translation of the thoracic cage. In: *Proceedings of the 30th Annual Meeting of the International Society for the Study of the Lumbar Spine, Cleveland, OH*. Toronto: ISSLS; 2002:159.
31. Colloca CJ, Keller TS, Gunzburg R. Neuromechanical characterization of intraoperative lumbosacral spinal manipulation. In: *Proceedings of the Association of Chiropractic Colleges / Research Agenda Conference VII. New Orleans, LA*, March 13-17, 2002. *Journal of Chiropractic Education* 2002; 16(1):5-6.
 32. Keller TS, Colloca CJ, Gunzburg R. In vivo motion response of the human lumbar spine during spinal manipulation. In: *Proceedings of the Association of Chiropractic Colleges / Research Agenda Conference VII. New Orleans, LA*, March 13-17, 2002. *Journal of Chiropractic Education* 2002; 16(1):22.
 33. Colloca CJ. Chiropractic management of Ehlers-Danlos Syndrome: A report of 2 cases. In: *Proceedings of the Association of Chiropractic Colleges / Research Agenda Conference VII. New Orleans, LA*, March 13-17, 2002. *Journal of Chiropractic Education* 2002; 16(1):4-5.
 34. Colloca CJ, Keller TS, Gunzburg R. Toward an understanding of the chiropractic adjustment: a Neuromechanical model derived from original data. In: *Proceedings of the Sixth Biennial World Federation of Chiropractic, Paris, France*, May 21-26, 2001:261-3.
 35. Keller TS, Beliveau JG, Colloca CJ. Determination of posterior-anterior lumbar spine motion patterns: a twenty-one degree of freedom sagittal plane model. In: *Proceedings of the Sixth Biennial World Federation of Chiropractic, Paris, France*, May 21-26, 2001:272-4.
 36. Colloca CJ, Keller TS, Seltzer DE, Fuhr AW. Lumbar Erector Spinae Reflex Responses to Mechanical Force, Manually-Assisted Thoracolumbar and Sacroiliac Joint Manipulation in Patients with Low Back Pain. In: *Proceedings of the 2000 International Conference on Spinal Manipulation, Bloomington, MN*, September 21-23, 2000: 20-2.
 37. Colloca CJ, Keller TS, Seltzer DE, Fuhr AW. Muscular and Soft-Tissue Contributions of Dynamic Posteroanterior Spinal Stiffness. In: *Proceedings of the 2000 International Conference on Spinal Manipulation, Bloomington, MN*, September 21-23, 2000: 159-60.
 38. Colloca CJ, Keller TS, Peterson TK, Seltzer DE, Fuhr AW. Correlation of L5 Dynamic Posteroanterior Spinal Stiffness to Plain Film Radiographic Images of Lumbosacral Disc Height. In: *Proceedings of the 2000 International Conference on Spinal Manipulation, Bloomington, MN*, September 21-23, 2000:179-80.
 39. Colloca CJ, Keller TS, Seltzer DE, Fuhr AW. Mechanical impedance of the human lower thoracic and lumbar spine exposed to in vivo posterior-anterior manipulative thrusts. In: *Proceedings of the 12th Conference of the European*

Society of Biomechanics. Trinity College, **Dublin, Ireland**, August 27-30, 2000: 171.

40. Keller TS, Colloca CJ. Dynamic response of the human lumbar spine: a 5 degree-of-freedom lumped parameter time and frequency domain model. In: Proceedings of the 12th Conference of the European Society of Biomechanics. Trinity College, **Dublin, Ireland**, August 27-30, 2000: 395.
41. Colloca CJ, Keller TS, Seltzer DE, Fuhr AW. Electromyographic responses to mechanical force, manually assessed spinal manipulative therapy. In: Proceedings of the 27th Annual Meeting of the International Society for the Study of the Lumbar Spine, **Adelaide, Australia**, April 9-13, 2000.
42. Keller TS, Colloca CJ. Mechanical force spinal manipulation increases trunk muscle strength assessed by electromyography: A comparative controlled clinical trial. In: Proceedings of the 27th Annual Meeting of the International Society for the Study of the Lumbar Spine, **Adelaide, Australia**, April 9-13, 2000.
43. Colloca CJ, Keller TS, Fuhr AW. Muscular and mechanical behavior of the lumbar spine in response to dynamic posteroanterior forces. In: Proceedings of the 26th Annual Meeting of the International Society for the Study of the Lumbar Spine, **Kona, Hawaii**. Toronto: ISSLS; 1999: p.136A.

CONFERENCE PROCEEDINGS (Submitted):

TEXTBOOKS:

1. Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997.

TEXTBOOK CHAPTERS:

1. Colloca CJ. The Place of Chiropractic Care. In: Szpalski M and Gunzburg R, eds. Surgery For Low Back Pain. Philadelphia: Lippincott Williams & Wilkins, 2010: in press.
2. Szpalski M, Gunzburg R, Colloca CJ, Moore RJ. Interspinous Devices: The State of the Art. In: Szpalski M and Gunzburg R, eds. Surgery For Low Back Pain. Philadelphia: Lippincott Williams & Wilkins, 2010: in press.
3. Colloca CJ, Keller TS, Lehman GJ, Harrison DD. The Use of Spine Measurement Instruments in Chiropractic Practice. In: Haldeman S, ed. Principles and Practice of Chiropractic, 3rd ed. New York: McGraw-Hill, Inc., 2004.

4. Colloca CJ. Articular Neurology, Altered Biomechanics, and Subluxation Pathology. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:19-64.
5. Colloca CJ. Leg Length Inequality: An Assessment of Asymmetry. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:65-91.
6. Fuhr AW, Green JR, Colloca CJ. Activator Methods Chiropractic Technique Basic Scan Protocol. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:111-6.
7. Fuhr AW, Green JR, Colloca CJ. Section II: Lower Extremities - Foot, Ankle, and Related Structures. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:125-51.
8. Fuhr AW, Green JR, Colloca CJ. Section II: Lower Extremities - Knee and Related Structures. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:152-80.
9. Fuhr AW, Green JR, Colloca CJ. Section III: Pelvis – Sacrum, Pelvis, and Related Structures. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:192-213.
10. Fuhr AW, Green JR, Colloca CJ. Section III: Pelvis – Hip and Related Structures. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:214-236.
11. Fuhr AW, Green JR, Colloca CJ. Section IV: Lumbar Spine – Additional Lumbar Subluxations. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:247-70.
12. Fuhr AW, Green JR, Colloca CJ. Section V: Thoracic Spine and Ribs – Additional Thoracic Vertebrae and Rib Subluxations. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:289-312.
13. Fuhr AW, Green JR, Colloca CJ. Section VI: Upper Extremities – Shoulder and Related Structures. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:325-359.
14. Fuhr AW, Green JR, Colloca CJ. Section VI: Upper Extremities – Elbow, Wrist, and Hand. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:381-400.

15. Fuhr AW, Green JR, Colloca CJ. Section VII: Cervical Spine and Occiput – Cervical Spine and Occiput – Additional Cervical Subluxations. In: Fuhr AW, Colloca CJ, Green JR, Keller TS. Activator Methods Chiropractic Technique. St. Louis: Mosby Year-Book, Inc., 1997:412-30.

PROFESSIONAL PUBLICATIONS:

1. Colloca CJ. Quality and management for growth in chiropractic practice. *DC Products Review* 2007; 7(9):52-55.
2. Colloca CJ. SWOT analysis of your practice. *DC Products Review* 2007; 7(8):48-51.
3. Colloca CJ. Ten traits of successful practices. *DC Products Review* 2007; 7(5):58-61.
4. Colloca CJ. The mentor staircase. *DC Products Review* 2007 7(4):56-9.
5. Colloca CJ. Innovate or stagnate. *DC Products Review* 2007; 7(3):56-8.
6. Colloca CJ. Quantifying spinal muscle activity and strength. *American Journal of Clinical Chiropractic* 2003; 13(4):6-7.
7. Colloca CJ. Chiropractic popularity and utilization on the rise. *The American Journal of Clinical Chiropractic* 2003; 13(2):12.
8. Colloca CJ. Improving Physical Examinations Via Quantifiable Spinal Assessments. *The American Journal of Clinical Chiropractic* 2003; 13(1):22.
9. Colloca CJ, Keller TS. Investigating the electromyographic flexion-relaxation phenomena as a measure of spinal function. *The American Journal of Clinical Chiropractic* 2002; 12(4):8-9.
10. Taylor SH, Arnold ND, Biggs L, Colloca CJ, Mireau DR, Symons BP, Triano JJ. A review of the literature pertaining to the efficacy, safety, educational requirements, uses and usage of mechanical adjusting devices. Technical Report Commissioned by the Chiropractors' Association of Saskatchewan, Regina SK.
11. Colloca CJ. Neurophysiological research holds a key to understanding mechanisms of adjustments. *The American Journal of Clinical Chiropractic* 2002; 12(2):22-3.
12. Colloca CJ. CBP Non-profit supported study accepted in *Clinical Biomechanics: Model predicts spinal motions during chiropractic adjustments*. *The American Journal of Clinical Chiropractic* 2001; 12(2):1,4.
13. Colloca CJ. New research establishes a mechanism of whiplash. *The American Journal of Clinical Chiropractic* 2001; 11(4):9.
14. Colloca CJ. Recent chiropractic related studies in the biomedical literature. *Journal of the Arizona Association of Chiropractic* 2001 Nov/Dec: 17-8.
15. Colloca CJ. Basic science research to investigate the effects of chiropractic

- adjustments on spinal function. *The American Journal of Clinical Chiropractic* 2001; 11(3):12-13.
16. Colloca CJ. Chiropractic ethnic cleansing alive and well in Saskatchewan. *The American Journal of Clinical Chiropractic* 2001; 11(2):1,4.
 17. Colloca CJ, Keller TS. Neuromechanical research to understand chiropractic adjustments. *The American Journal of Clinical Chiropractic* 2001; 11(2): 6-7.
 18. Colloca CJ. Mechanosensitive desensitization and nociceptive sensitization: the most common clinical presentation seen in practice. *The American Journal of Clinical Chiropractic* 2001; 11(1):6-7.
 19. Colloca CJ. Phoenix based chiropractic research: Biomechanical & neurophysiological response of chiropractic adjustments. *Journal of the Arizona Association of Chiropractic* 2000 (Nov/Dec):5-8.
 20. Colloca CJ. Biomechanical and Neurophysiological Responses of Chiropractic Adjustments: Ongoing Original Research. *The American Journal of Clinical Chiropractic* 2000; 10(4):19-20.
 21. Colloca CJ. Dublin's ESB conference – The old meets the new. *Dynamic Chiropractic* 2000 (Oct 31); 18(23):14,16,53.
 22. Colloca CJ. Activator Tips: First metatarsal and first cuneiform subluxation. *Success Express* 2000; 20(5):27-8.
 23. Colloca CJ. New NICR research accepted for publication at major 2000 spine conferences. *Activator Vision* 2000; 15(3):10-11.
 24. Colloca CJ. NICR research to be presented at ISSLS 2000, Adelaide, Australia. *Activator Vision* 2000; 15(2):8,21
 25. Colloca CJ. Focus on Activator Methods Chiropractic Technique. *Canadian Chiropractor* 2000; 5(1):18-21.
 26. Colloca CJ. Our vision is your success. *Activator Vision* 2000; 15(1):4,15-16.
 27. Colloca CJ. A record 18 activator papers/presentations published or in review in 1999-2000. *Activator Vision* 2000 15(1):8,18.
 28. Colloca CJ. Activator. The success and applications of Activator Methods. *InPractice* 1999; 4(1):34-41.
 29. Fuhr AW, Colloca CJ. Subluxation: we are closer than you think. *Activator Update* 1999; 14(6):3-5,14.
 30. Colloca CJ. Activator[®]II – Enhancements for improved patient care. *Activator Update* 1999; 14(6):12-14.

31. Colloca CJ. Documentation to improve my practice? Absolutely! *The Australian Chiropractor*; December, 1999: 3.
32. Colloca CJ. Annual Activator Methods instructors meeting debuts new fall program. *Activator Update* 1999; 14(5):9-14.
33. Colloca CJ. New Activator Methods Clinical Compendium debuts at the 1999 fall seminars. *Activator Update* 1999; 14(4):1,5.
34. Colloca CJ. Solid patient education, report of findings focus. *Activator Update* 1999; 14(4):6-10.
35. Colloca CJ. Research Update: Activator research presented at ISSLS and continued spine research at NASA. *Activator Update* 1999; 14(4):11-12.
36. Colloca CJ. State of the Art Literature Review. *ICA Review* 1999; 55(4):72-5.
37. Colloca CJ. www.activator.com. *Activator Update* 1999; 14(3):1,5.
38. Colloca CJ. Research Update: Activator research accepted for presentation at the 1999 International Society for the Study of the Lumbar Spine. *Activator Update* 1999; 14(3):10.
39. Colloca CJ. State of the Art Literature Review. *ICA Review* 1999; 55(2):72-5.
40. Colloca CJ. 1999 Activator Methods Cervical Spine Symposium: True continuing education. *Activator Update* 1999; 14(1):3-5.
41. Colloca CJ. Research Update: New manuscripts on the AAI II, spinal stiffness, and neurophysiological responses to chiropractic adjustments. *Activator Update* 1999; 14(1):10-12.
42. Colloca CJ. State of the Art Literature Review. *ICA Review* 1999; 55(1):64-7.
43. Colloca CJ. Chiropractic management of soft-tissue injury & repair: excerpts from the Activator Methods Cervical Spine Symposium. *Activator Update* 1998; 13(6):1,4.
44. Colloca CJ. Literature Update. *Activator Update* 1998; 13(6):11,14.
45. Colloca CJ. State of the Art Literature Review. *ICA Review* 1998; 54(4):71-5.
46. Colloca CJ, Fuhr AW. Day of the Spine in Paris. *Dynamic Chiropractic* August 10, 1998; 16(17):23, 30-1.
47. Colloca CJ. New cervical spine symposium program debuts at 1998 fall Activator Methods seminars. *Activator Update* 1998; 13(5):7,10-12.

48. Colloca CJ. The most effective way of obtaining new patients aside from referrals. *Activator Update* 1998; 13(5):12,17.
49. Colloca CJ. Activator Methods introduces Pronex® II axial-extension traction for cervical spine rehabilitation and chronic pain control. *Activator Update* 1998; 13(5):15-16.
50. Colloca CJ, Fuhr AW. Report from the 25th annual meeting of the International Society for the Study of the Lumbar Spine (ISSLS), June 9-13, 1998, Brussels, Belgium: Research implications for the chiropractic profession. *Activator Update* 1998; 13(5):5,8.
51. Colloca CJ. Disc injury and new data on MRI high intensity zone. *The American Journal of Clinical Chiropractic* 1998; 8(3):16-7.
52. Colloca CJ. Presidential guest speakers at the '98 meeting of the international society for the study of the lumbar spine. *The American Journal of Clinical Chiropractic* 1998; 8(3):25.
53. Colloca CJ. State of the Art Literature Review. *ICA Review* 1998; 54(3):74-8.
54. Colloca CJ. New Activator Methods fall seminars packed with new research and take home value. *Activator Update* 1998; 13(4):1,4,12.
55. Colloca CJ. To the Students: How to achieve low overhead with high volume efficiency. *Activator Update* 1998; 13(4):6-7.
56. Colloca CJ. Literature Update. *Activator Update* 1998; 13(4):10-2.
57. Colloca CJ. The National Chiropractic Mutual Insurance Company's \$25,000 grant allows for neurophysiological "Subluxation" investigations to be done on live human subjects. *Activator Update* 1998; 13(3):1,4.
58. Colloca CJ. Literature Update. *Activator Update* 1998; 13(3):10,13.
59. Colloca CJ. NCMIC grant allows for research on live human subjects. *Dynamic Chiropractic* April 6, 1998; 16(8):25,28.
60. Colloca CJ. Implications for the natural superiority of the chiropractic adjustment and a look to the future. *The American Journal of Clinical Chiropractic* 1998; 8(1):6-7.
61. Colloca CJ. Break through study confirms Activator Method's research agenda. *Activator Update* 1998 March/April; 13(2):1,4,14.
62. Colloca CJ. Literature Update. *Activator Update* 1998 March/April; 13(2):10,13-4.
63. Colloca CJ. Colloca CJ. State of the Art Literature Review. *ICA Review* 1998;

- 54(2):76-80.
64. Colloca CJ. State of the Art Literature Review. *ICA Review* 1998; 54(1): 88-91.
 65. Colloca CJ. Lumbar Spine Symposium: Bringing You the Latest Literature ... and taking it public. *Activator Update* 1998 Jan/Feb; 13(1):1,4,6.
 66. Colloca CJ. Literature Update. *Activator Update* 1998 Jan/Feb; 13(1):10,13-4.
 67. Fuhr AW, Colloca CJ. Evaluation and management of common clinical syndromes utilizing Activator Methods Chiropractic Technique. *D.C. Tracts* 1998; 10(2):3-8.
 68. Colloca CJ. Documentation: A pain in the neck, or ... The key to better outcomes, longer patient retention, and more referrals. *InPractice* 1997; 2(6): 8-13.
 69. Fuhr AW, Colloca CJ. Activator Methods Chiropractic Technique: A contemporary vision for clinical practice. *Chiropractic Products* 1997 October; 12(8):62-6.
 70. Colloca CJ. High Velocity, Low-Force Specific Chiropractic Adjustment. *The American Journal of Clinical Chiropractic* 1997; 7(4):26-7.
 71. Colloca CJ. State of the Art Literature Review. *ICA Review* 1997 July/Aug; 53(4):87-90.
 72. Colloca CJ. Another Side to the "\$50 Roll." *Dynamic Chiropractic* 1997 July 14; 15(15):6,15.
 73. Colloca CJ. If They Only Knew What We Know ... What the Literature Recommends. *The American Journal of Clinical Chiropractic* 1997; 7(3):11.
 74. Colloca CJ. Utilizing proper documentation in chiropractic practice. *Activator Update* 1997 May/June; 12(3):4,6,26.
 75. Colloca CJ. To The Students: Opening Up vs. Associating. *Activator Update* 1997 May/June; 12(3):7,26.
 76. Colloca CJ. Literature Update. *Activator Update* 1997 May/June; 12(3):21-23.
 77. Colloca CJ. Documentation in Chiropractic Practice: Bridging the Gap Between Clinical Presentation and the Literature. *The American Journal of Clinical Chiropractic* 1997; 7(2):20-1.
 78. Colloca CJ. Research takes time. *NICR Bulletin* 1997; 5(1):1,6.
 79. Colloca CJ. Literature Update. *Activator Update* 1997 March/April; 12(2):21-2.

80. Colloca CJ. Activator Methods: A Present Day Look to the Future. *Activator Update* 1997 Jan/Feb; 12(1):21-2.
81. Colloca CJ. Literature Update. *Activator Update* 1997 Jan/Feb; 12(1):21-2.
82. Colloca CJ. The Afferent Pathways of Discogenic Pain Syndromes: Understanding and Implementing Clinical Assessment Procedures to Assist in Diagnosis and Management (Part I of II). *The American Journal of Clinical Chiropractic* 1996; 6(4):20-1.
83. Colloca CJ. State of the Art Literature Review. *ICA Review* 1996 Sept/Oct; 52(5):76-9.
84. Colloca CJ. State of the Art Literature Review. *ICA Review* 1996 July/August; 52(4):77-81.
85. Colloca CJ. Central Sensitization: Explanations for Common Clinical Observations and Chiropractic Intervention. *The American Journal of Clinical Chiropractic* 1996; 6(3):6-7.
86. Colloca CJ. Literature Update. *Activator Update* 1996 July/August; 11(4):7-8.
87. Colloca CJ. State of the Art Literature Review. *ICA Review* 1996 May/June; 52(3):61-7.
88. Colloca CJ. Literature Update. *Activator Update* 1996 May/June; 11(3):7-8.
89. Colloca CJ. Somatic Afferents and the Autonomic Nervous System: An Update on Somatovisceral Reflexes. *The American Journal of Clinical Chiropractic* 1996; 6(2):10.
90. Colloca CJ. Literature Update. *Activator Update* 1996 March/April; 11(3):7-8.
91. Colloca CJ. Evidence of Vertebral Subluxation: Are Asymptomatic Spinal Abnormalities Clinical Entities? *The American Journal of Clinical Chiropractic* 1996; 6(1):21,23.
92. Colloca CJ. Literature Update. *Activator Update* 1996 Jan/Feb; 11(1):7-8.
93. Colloca CJ. Current Concepts of Pain: A Neuroanatomic & Physiological Discussion of Mechanical Alterations to the Human Frame. *The American Journal of Clinical Chiropractic* 1995; 5(4):10-11.
94. Colloca CJ. Literature Update. *Activator Update* 1995 Sept/Oct; 10(5):3-4,9.
95. Colloca CJ. The Effects of Posture in Dynamics of the Nucleus Pulposus. *The American Journal of Clinical Chiropractic* 1995; 5(3):6-7.
96. Colloca CJ. Literature Update. *Activator Update* 1995 July/August; 10(4):25,29.

97. Colloca CJ. Neurological Consequences of Ligamentous Alteration and Deformation: A Necessary Review. *The American Journal of Clinical Chiropractic* 1995; 5(2):16-7.
98. Colloca CJ. Literature Update. *Activator Update* 1995 May/June; 10(3):18-22.
99. Colloca CJ. Neurological Considerations of Vertebral Subluxation: A Brief Review of the Literature. *Communique: The Bulletin of the New York Chiropractic Council*. Upstate/District 6. Albany, Lake Placid & Syracuse, Circulation 425. 1995 May; IV(4):1-4.
100. Colloca CJ. The Disc, Ligamentum Flavum, & Canal Stenosis. Considerations in Cervical Extension Traction and it's Protocols. *The American Journal of Clinical Chiropractic*; 5(1):24-6.
101. Colloca CJ. Literature Update. *Activator Update* 1995 March/April; 10(2):18-21.
102. Colloca CJ. Neurological Considerations of Vertebral Subluxation: A Brief Review of the Literature. *Elan Vital* (Life College) 1995 March; XIV(2):24-6.
103. Colloca CJ. Manipulation vs. Adjustment: More Than Just Intent and Semantics. *Elan Vital* (Life College) 1995 February; XIV(1):1.
104. Colloca CJ. Activator Club: An Introductory Look at the Detection and Correction of the Vertebral Subluxation by Activator Methods Chiropractic Technique. *Elan Vital* (Life College) 1995 April; XIII (3):6.

VIDEO PROGRAM PRESENTATIONS:

1. Colloca CJ. Introducing Impulse iQ. VIDEO presentation, ©2008, Neuromechanical Innovations, LLC, 101 S. Roosevelt Ave, Chandler, AZ 85226.
2. Colloca CJ, Gudgeon JW. The Neuromechanical System: 4 DVD Boxset. VIDEO presentation, ©2008, Neuromechanical Innovations, LLC, 101 S. Roosevelt Ave, Chandler, AZ 85226.
3. Colloca CJ, Keller TS. Introducing Impulse. VIDEO Presentation, ©2004, Neuromechanical Innovations, LLC, 11011 S. 48th St., Suite 220, Phoenix, AZ 85044, 2004.
4. Colloca CJ, Fuhr AW, Gudgeon JW. Activator Methods Clinical Compendium. VIDEO Presentation, ©1999, Activator Methods International, Ltd., 3714 East Indian School Road, Phoenix, AZ 85018, 1999.
5. Colloca CJ, Fuhr AW. Activator Methods New Patient Orientation. VIDEO Presentation, ©1999, Activator Methods International, Ltd., 3714 East Indian School Road, Phoenix, AZ 85018, 1999.

6. Colloca CJ, Fuhr AW. Activator Methods Report of Findings. VIDEO Presentation, ©1999, Activator Methods International, Ltd., 3714 East Indian School Road, Phoenix, AZ 85018, 1999.
7. Colloca CJ, Fuhr AW. The Cervical Spine Symposium, Part I. VIDEO Presentation, ©1998, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1998.
8. Colloca CJ, Fuhr AW. The Cervical Spine Symposium, Part II. VIDEO Presentation, ©1998, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1998.
9. Colloca CJ. Prevention and Relief of Neck Pain, Headache, and Carpal Tunnel Syndrome. VIDEO Presentation, ©1998, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1998.
10. Colloca CJ, Fuhr AW. The Lumbar Spine Symposium, Part I. VIDEO Presentation, ©1997, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1997.
11. Colloca CJ, Fuhr AW. The Lumbar Spine Symposium, Part II. VIDEO Presentation, ©1997, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1997.
12. Colloca CJ. Low Back Pain: A 20th Century Epidemic. VIDEO Presentation, ©1997, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1997.
13. Colloca CJ. Articular Neurology, Altered Biomechanics, and Subluxation Pathology. VIDEO Presentation, ©1996, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1996.
14. Colloca CJ. Leg Length Inequality: An Assessment of Asymmetry. VIDEO Presentation, ©1996, Activator Methods, Inc. P.O. Box 80317, Phoenix, AZ 85060, 1997.

INVITED LECTURES

1. Colloca CJ. Neuromechanical advances in chiropractic for athletic performance enhancement. *International Chiropractors Association's 18th Annual Symposium on Natural Fitness*. **Columbus, OH, March 5, 2010.**
2. Colloca CJ. Muscular recovery of ligamentous injury: implications for clinical decision making and rehabilitation. *Soft Tissue Disorders and Injuries of the Spine – Controversies in Etiopathogenesis, management and costs. XVIth Brussels International Spine Symposium*. **Brussels, Belgium, November 20-21, 2009.**

3. Colloca CJ. Introduction to Neuromechanical Instrument Adjusting: Impulse Adjusting Technique. Proceedings of the 10th Biennial Congress of the World Federation of Chiropractic. **Montreal, Quebec, Canada, April 30 – May 2, 2009:57-59.**
4. Colloca CJ. The Place of Chiropractic Care. *XIVth Brussels International Spine Symposium.* Surgery for Low Back Pain? Controversies in Etiopathogenesis, Management and Costs. **Brussels, Belgium, November 16-17, 2007.**
5. Colloca CJ. Neurological mechanisms of post-traumatic cervicogenic headache (Plenary Presentation). *2007 International Whiplash Trauma Conference.* Trump Sonesta Beach Resort, **Miami, FL, October 26-27, 2007.**
6. Colloca CJ. “Biomechanical Responses to Lumbar Spinal Manipulation”; “The Role of Neuromuscular System in Low Back Pain” (with Marras W, Govenden S, Szpalski M, Gunzburg R, Hall D, LeHuec JC, Aebi M and Cinotti G). *The International Society for the Study of the Lumbar Spine Instructional Course.* **Johannesburg, South Africa, September 1-2, 2007.**
7. Colloca CJ. “Neuromechanical Advances in Chiropractic.” *The New Hampshire Chiropractic Association Annual Convention,* Marriott Hotel, **Nashua, NH, April 21-22, 2007.**
8. Colloca CJ. “Science Behind the Subluxation: Biomechanical and Neurophysiological Responses to Spinal Manipulation and Validating Quantitative Assessments” (With Kawchuk GN, and Rosner T). *Association of Chiropractic Colleges XIV / Research Agenda Conference XII.* **Phoenix, AZ, March 16-18, 2007.**
9. Colloca CJ. “Neuromechanical Advances in Chiropractic and The Neuromechanical System™”. *Institute Franco-European Chiropractic,* **Paris, France, March 24-25, 2007.**
10. Colloca CJ. “Neuromechanical Advances in Chiropractic.” The Iowa Chiropractic Society, **Des Moines, IA, March 9, 2007.**
11. Colloca CJ. “Neuromechanical Advances in Chiropractic. The Napa County Chiropractic Association, **Napa, CA, March 10, 2007.**
12. Colloca CJ. “Documentation in Chiropractic Practice.” The South Carolina Chiropractic Association, **Myrtle Beach, SC, June 8-9, 2006.**
13. Colloca CJ. “Whiplash Updates – 2006”; “Digital Motion X-Ray Research”. Digital Motion X-Ray Annual Conference. **Grand Cayman, Cayman Islands, May 25-26, 2006.**
14. Colloca CJ. “Biomechanical and Neurophysiological Responses of Spinal Manipulation.” Chiropractic Biophysics Annual Convention, **Chicago, IL, August 25-27, 2006.**

15. Colloca CJ. "Cervicogenic Headache: The State of the Art". New York State Chiropractic Association Spring Convention, **East Elmhurst, NY**, *April 29-30, 2006*.
16. Colloca CJ. "Documentation in Chiropractic Practice." Washington State Chiropractic Association, **Seattle, WA**, *February 11, 2006*.