

CURRICULUM VITAE

Gregory D. Cramer, D.C., Ph.D.
National University of Health Sciences
200 E. Roosevelt Road
Lombard, Illinois 60148
Phone: (630) 889-6536
E-mail: gcramer@nuhs.edu

BIRTH DATE:

March 2, 1955

EDUCATION:

Miami University (of Ohio), 1973-1975

Major: Zoology

National College of Chiropractic, 1975-1979
(now National University of Health Sciences)

Bachelor of Science, 1977

Doctor of Chiropractic, 1979

Medical College of Ohio at Toledo, 1983-1987
(now University of Toledo College of Medicine and
Life Sciences)

Ph.D. in Medical Sciences (Anatomy), 1987

Area of concentration: neuroanatomy

Dissertation: Volumetric Determination of the
Encephalic Ventricles with Magnetic
Resonance Imaging

POSITIONS HELD:

Private practice of chiropractic
Wauseon, Ohio

May 1979 – March 1984 (part-time August 1983 – March
1984).

Instructor, Department of Anatomy
National College of Chiropractic
December 1986-1988.

Assistant Professor, Department of Anatomy
National College of Chiropractic
December 1988-1991

Coordinator of Clinical Research
National College of Chiropractic
April 1989-August 1990.

Chairman, Department of Anatomy
National College of Chiropractic
September 1990- July 1998.

Associate Professor, Department of Anatomy
National College of Chiropractic
December 1991-95 (tenured December, 1993).

Professor, Department of Anatomy
National College of Chiropractic/NUHS
December 1995-present.

Professor and Dean of Research
National College of Chiropractic
December 1997-September 2000.

Professor and Dean of Research
National University of Health Sciences (name change)
September 2000-present.

PROFESSIONAL MEMBERSHIPS:

Chiropractic Related:

American Chiropractic Association

Ohio State Chiropractic Association (OSCA)

Co-chairman OSCA convention, 1980-1983.

Director at Large, OSCA, 1982, 1983.

C-PAC (chiropractic political action committee) chairman, OSCA, 1983.

Leadership Award, OSCA, 1982, 1983.

Northwest Ohio Chiropractic Association

Illinois Chiropractic Association

National University of Health Sciences Alumni Association

Association for the History of Chiropractic

Basic Science/Research Related:

Society for Neuroscience (1988-present)

American Association of Clinical Anatomists (1990-present)

American Association of Anatomists (Federation of Associations and Societies of
Experimental Biology, FASEB) (1988-present)

American Association for the Advancement of Science (1999-2000)

Society of Research Administrators (1998-2001)

LICENSES:

Licensed to practice chiropractic in Ohio (1979-1998, allowed license to expire in January
1998) and Illinois (1988 - present)

TEACHING:

Medical College of Ohio (now University of Toledo Medical College)

Neuroanatomy to Medical Students (1985, 1986) presented selected lectures and
taught in all laboratories

Gross Anatomy to Medical Students (1985, 1986) - laboratory

Histology to Graduate Students in the Basic Medical Sciences (1985)

Gross Anatomy to Nursing Students (1985) - presented selected lectures and
participated in laboratory portion of course

National College of Chiropractic/National University of Health Sciences:

Anatomy of the spine, lecture and laboratory, 1987-2007.

Anatomy of the head and neck, thorax, abdomen, and pelvis (AT 3103), lecture and
laboratory, Summer trimester 1987 - Fall 1993.

Advanced neuroanatomy: Spring trimester 1987

Special topics in anatomy: Spring trimester 1991 - 1998.

"Cross sectional anatomy of the head (brain) and neck," to radiology residents at
NCC/NUHS, 1989-present.

Small group facilitator for general and laboratory diagnosis, research, and
psychopathology courses 1993-2004.

Lecture on the anatomy of the pediatric spine September, 1995 – 2005 (see below for
continuation of pediatric spine lectures to the present).

Small Group Facilitator for orthopedics course Fall 1995.
 Also, see "Academic Experiences" and "Postgraduate Teaching" sections.
 Unit 1 Coordinator, Guided Discovery Curriculum, Summer Trimester 1996.
 Small Group Facilitator, Trimester 1, Guided Discovery Curriculum, Summer Trimester 1996-Spring 1997; Trimester 2, Modular Curriculum, Fall 2000–2004.
 Lecturer, spinal anatomy and clinical neuroanatomy (pain and headache), Trimester 1, Guided Discovery Curriculum, Summer Trimester 1996–Summer 2000; Trimester 2 Modular Curriculum, Fall 2000–2004.
 Lecturer, spinal anatomy and neuroanatomy, Trimester 2, Guided Discovery Curriculum, Summer Trimester 1996–Summer 2000.
 Lecturer, anatomy of the human viscera, Trimester 4, Guided Discovery Curriculum, Summer Trimester 1997.
 Lecturer, neuroanatomy, Trimester 5, Guided Discovery Curriculum, Fall Trimester 1997.
 Panelist, cervical flexion and extension injuries, Trimester 6, Guided Discovery Curriculum, Spring Trimester 1998-1999.
 Lecturer, anatomy of the pediatric spine, Trimester 7, Guided Discovery Curriculum, Summer Trimester 1998–2000; Trimester 2, Modular Curriculum, Fall 2000–2004.
 Lecturer, basic science research related to chiropractic and the clinical anatomy of chiropractic manipulative therapy (adjusting), Trimester 8, Guided Discovery Curriculum, Fall Trimester 1998-2002; Trimester 2, Modular Curriculum, Fall 2000–2004.
 Lecturer, review of the cervical spine, Trimester 5, Modular Curriculum, Spring 2001-2004.
 Small Group Facilitator, Trimester 8, Guided Discovery Curriculum, Spring 1999.
 Small Group Facilitator, Trimester 7, Guided Discovery Curriculum, Spring 2000, Summer 2000.
 Small Group Facilitator, Trimester 2, Modular Curriculum, Spring 2001-2004.
 Board Reviews as a part of the Guided Discovery Curriculum 6 hours (2 hours spinal anatomy, 4 hours neuroanatomy) two times per year (September and March) 1997-2000; as requested by students during Modular Curriculum, Spring 2001-Fall 2002.
 Lecturer, biomechanics of the spine (3 hours). Spring 2002-Spring 2008.
 Lecturer, Clinical anatomy of the vertebral artery and the risk vs. benefits of chiropractic adjusting. (Done in conjunction with Bruce Hodges, DC 5th trimester presentation on the informed consent process in clinical care.) Summer semester 2003-Fall 2004.
 Trimester 1, AT 4071 and AT 4072L, Anatomy of the Spine, Extremities, and Spinal Cord (teach spinal anatomy component; 4 hours lecture/week, 1 hour group/week, 7 hours of lab/week, for five weeks), Part of the new curriculum implemented Fall Trimester, 2004 and revamped to Anatomy of the Spine and Extremities in Spring Trimester 2005 – Fall 2007.
 Lecture "Ongoing Research at NUHS" in Trimester 4 course RE 4192, Spring Trimester 2005-Spring Trimester 2006.
 Trimester 1, AN1501, Anatomy of the Spine, Extremities, and Spinal Cord (teach Pediatric Spine and Clinical Anatomy of Spinal Manipulative Therapy, 4 hours lecture), Fall 2007 - present.
 Lecturer in Evidence-Based Practice in Trimesters 1 and 2 (Trimester 1, beginning Fall 2008) "Evidence-Based Practice Program at NUHS" and "Student Involvement in Ongoing NUHS Research," Spring 2006-present.
 Lecture, "Pain Referral from the Oral Cavity" – one-hour large group and lecture done with L. Hill, DC in Physiological Therapeutics 2, PT6172, Spring 2001-present.
 Examiner in Trimester 7 OSCE examination, station assessing the cervical region. Fall 2008-Summer 2009.
 End of Life Panel, 7th Trimester Class of Robert Shiel, PhD, fall 2012.

Journal Club, Facilitator for Chicago Clinic, Fall 2013 – present.
 Independent Research Course (elective, EL6521), 1-2 credit hours, Fall 2013 (1 student) – present.

RESEARCH:

See "grants" and "publications."

MENTORING IN RESEARCH:

Research Fellow/Graduate Student/Resident/Post-doc	Activity Following Graduation
John Kahler	Entered medical school with wife Shelly Lehman
Shelly Leman	Entered medical school with husband John Kahler
Roc Byrd	Private practice of chiropractic
Jay Greenstein/Fellow	Private practice of chiropractic, practice-based research in sports medicine, has presented many abstracts at a wide variety of medical and CAM research conferences and has published in this field
Joe Cantu/Fellow	Completed NUHS residency in diagnostic imaging, continued to participate in ongoing NUHS research and is currently the morphometry radiologist for the NIH funded clinical trial assessing Z joint gapping
¹ Richard Dorsett/Fellow	Private practice of chiropractic
² Patrick W. Frank/Fellow	Private practice of chiropractic, anatomy laboratory instructor at University of Toledo College of Medicine
¹ Nathaniel R. Tuck/Fellow	Private practice of chiropractic
¹ Caroline Scott/Fellow	Private practice of chiropractic, currently a veterinary medical student
² Jaeson Fournier/Fellow then Research Resident (1996-1998, 1998-2001)	Completed Research Residency (including MPH at UIC) and is currently Director of Community Health Services/Primary Care Director, Ingham County Health Department, Lansing, Michigan.
Bradley Hubbard/Fellow (1998-2000)	Radiological technologist, and private practice of chiropractic
Shahar Kenin/Post-doc (1999-2000)	Anatomy Fellow, following graduation remained for one year to teach anatomy at NUHS, Northwestern Medical School, and UIC School of Medicine and to do research at NUHS (GC as mentor). Faculty of Medicine, Department of Anatomy and Anthropology, Tel Aviv University, Sackler School of Medicine
Jason Schliesser/Fellow (2000-2002)	Completed MPH at University of Toledo, currently in private practice, has published case studies (one currently submitted)
Christopher Wolcott/Fellow (2002-2004)	Worked as an NUHS Research Clinician, the private practice of chiropractic in Chicago, currently also adjunct faculty at NUHS working as an instructor in R25 evidence-based practice program

Joshua Little/Fellow/post-doc (2004-2006)	Following graduation was hired as Research Technician in NUHS Morphometry Lab for two semesters until matriculated into the PhD program in clinical anatomy (neurobiology) at St. Louis University. Completed PhD in 2011, continued as post-doc; plans a career in CAM research.
Thomas Grieve/Fellow then post-doc (2006-2008, 2008-2010)	Following graduation received funding from NIH (NIH/NCCAM Grant # 3R01 AT000123) as an Administrative Supplement to an R01 grant (April 1, 2008 – March 31, 2010). The award allowed Dr. Grieve to also pursue and complete the MPH at UIC. Instructor in Department of Research at NUHS, pursuing a research career in CAM.
Joshua Healy/Fellow (2008-2010)	While a Research Fellow participated in a clerkship at the Veteran's Administration Hospital in Danville, Illinois. Practicing chiropractic in Indianapolis, Indiana.
Mabel Chang, DC/Research Resident (2008-2011)	J.Cambron, DC, PhD primary mentor. I worked with Dr. Chang regularly as she rotated through my research studies. I also had weekly meetings with her regarding her current projects and career path.
³ Muhammed Khan, MD/post-doc (2010)	New NUHS faculty, mentored in research methods (and listed in grant as a mentored faculty) during project, "Z joint changes assessed by MRI in low back pain patients.
Adam Habeck/Fellow (2010)	Private practice of chiropractic, Wisconsin
Robert Press/Fellow (2011)	Private practice of chiropractic, New Jersey
Rebecca Furlano/Fellow (2012)	Graduated, December 2012 – private practice of chiropractic, Wisconsin
Luis Real/high school student	Proviso Math and Science Academy (PMSA) – Senior Research Project – Luis spent one day/week throughout Spring Trimester 2012 working on supervised projects (comfort of SMT survey and morphology of cavitating Z joints).
Irene Chang, MS, DrPT (2013)	Graduated, August 2013 – practicing in a multidisciplinary clinic in Hong Kong, China
Matthew Budavich/Fellow (2013)	Current Fellow (10 hours/week)
Garen Wright/Fellow (2013)	Current Fellow (10 hours/week)

¹Because of the high debt incurred during chiropractic education, many of the Research Fellows who were interested in a career in CAM research were not able to pursue these goals. The recent addition of loan repayment programs and career development awards provides tremendous opportunities for highly motivated students (e.g., the Research Fellows) to pursue their goals of a career in CAM research.

²NUHS *Anatomy* Fellows who published research papers or abstracts (under the direction of G. Cramer when Chairman of the Department of Anatomy) while students at NUHS while GC Chairman of the Department of Anatomy.

³NUHS Faculty being mentored in research.

Master Degrees:

Ariel M. Medina, mentor on master degree thesis titled, "Determination of the distance between adjacent lumbar vertebrae by an ultrasonic based image system: a feasibility study." 2005 Auburn University, Department of Mechanical Engineering. Provided guidance on development of morphometry phantom for determining reliability of ultrasound measurement system.

Preetam Bora, member of Graduate Advisory Committee and mentor for thesis project titled, "Cavitation Studies of Lumbar Zygapophysial Joints using Vibration Measurements." 2011 Auburn University, Department of Mechanical Engineering. This project was part of a competitive revision (National Institutes of Health, National Center for Complimentary and Alternative Medicine [NCCAM] Grant # 3R01 AT000123-06S2) to the grant entitled, "Z Joint Changes in Low Back Pain Following Adjusting" and was conducted at the NUHS MRI and laboratory facilities (NCCAM Grant # 2R01 AT000123, G Cramer, PI). Master degree thesis successfully defended at Auburn University, April 1, 2011.

Master Degree Defense Committees for NUHS Capstone Projects:

M.S. in Diagnostic Imaging: H. Miley, DC (2008); J. Pedley (2009), R. Heiser (2010); M. Choi (2012).

PhD Dissertation:

Hayek, Raymond, External reviewer for dissertation entitled, "Central projection of afferents innervating upper thoracic spine in the rat at T1 to T4," Macquarie University, Australia, December, 2000, 330 pp.

AWARDS:

For contribution to chiropractic education, Delta Tau Alpha Honorary Society, July 1989.

Student ACA - Dr. Clyde Martin Award for contributions to chiropractic education and research, September 20, 1989.

National College of Chiropractic Faculty Development Award - for achievements in research, teaching, and service, personal and professional development, September 1990.

Consortium for Chiropractic Research and Foundation for Chiropractic Education and Research; Scientific Paper Award - for: Cramer, G.; Howe, J.; Glenn, W.; Dorsett, R.; Gongaware, K.; Dellaripa, J.; Rongaus, J.; and Aoy, M. 1994 The size of the lumbar intervertebral foramina as determined from horizontal images of magnetic resonance imaging scans. The 1994 International Conference of Spinal Manipulation.

The National College of Chiropractic, President's Service Award - "for consistent high performance and achievement while maintaining a positive working relationship with other members of the college community," September 1994.

National College of Chiropractic Faculty Development Award - for achievements in research, teaching, and service, personal and professional development, September 1995.

"Best Presentation of a Paper," Presented by the Association for the History of Chiropractic; for "The Holy Spine: The History of Scientific Investigation of the Intervertebral Foramina." Annual Meeting of the Association for the History of Chiropractic, Hayward, California, February 21-22, 1998.

"Best Podium Presentation," Presented at the Inaugural Scientific Conference of the Consortium of Canadian Chiropractic Research Centers, University of Calgary, Alberta, Canada, November 14-15, 1998.

Instructor of the Trimester for First Trimester, National College of Chiropractic, Spring Trimester 2000.

Instructor of the Trimester for First Trimester, National University of Health Sciences, Fall Trimester 2004, Spring Trimester 2006, Summer Trimester 2006, Fall Trimester 2006.

Text: Cramer, G.; Darby, S. 1995 Basic and clinical anatomy of the spine, spinal cord, and ANS. Mosby Year Book, St. Louis, 293 illustrations, 441pp. was selected as a "Textbook of Excellence for Spine Care Professionals" by the North American Spine Society (primarily orthopedic surgeons) and a signed copy was included in the "signature edition collection" of their archives. March 2001.

NUHS 2004 Alumnus of the Year: for contributions to education and research, June 2004.

Cramer, G. 2004 Listed as "Examples of Quality of Research Fellows" by the Foundation for Chiropractic Education and Research. Advance, 24:3.

Researcher of the Year, American Chiropractic Association, 2005.

Listed in Who's Who Among America's Teachers, 2005-present.

Participated in "Meet the Author" sponsored by the American Association of Anatomists at the Experimental Biology meetings in 2009, 2010, 2011, and 2012. Authors of anatomy textbooks are invited to meet with students and faculty from around the world to discuss their textbook. G. Cramer was asked to participate for the text, "Basic and Clinical Anatomy of the Spine, Spinal Cord, and ANS."

Best Paper Award for: Cramer G; Ross K; Bora P; Raju P; Selby S; Cambron J; Habeck A; Dexheimer J; McKinnis R. 2011 Localization of cavitations using accelerometry. Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 17-19. Journal of Chiropractic Education 25:77b. (2000 word abstracts required for the meeting).

Distinguished Alumni Award, Wauseon (Ohio) High School, April 29, 2011.

Drugless Research Hall of Fame (Parker University), January, 2012.

COMMITTEES:

Accreditation renewal committee, Medical College of Ohio Graduate School (student member), 1984.

Graduate student representative to Anatomy Department Meetings, Medical College of Ohio, 1985.

Animal care and use committee, National College of Chiropractic, 1987.

Internal review board for human research, National College of Chiropractic, 1987-1989.

Admissions committee, National College of Chiropractic, 1987-1993.

Budget committee, National College of Chiropractic, 1987-1993.

Ad-Hoc committee for development of a faculty clinic, 1988.

Search committee for Director of Clinics, National College of Chiropractic, 1988.

Search committee for Dean of Research, National College of Chiropractic, 1988.

Search committee for Research Scientist, Practice Consultants Clinical Research Center, 1989.

Self study for accreditation by Council on Chiropractic Education and North Central accrediting agency, Subcommittee for scholastic regulations, Chairman, 1988.

Enrollment task force, National College of Chiropractic, 1989.

Ad-Hoc committee for development of research policies, 1989.

Curriculum committee, 1990-2000.

Search committee for Director or Admissions, 1990.

Department chairperson committee, 1990-1998.

Post-graduate advisory committee, 1992-present.

Ad-Hoc committee for development of faculty senate sub-committees, 1993.
 Ad-Hoc committee for the review of tenure policies, 1994.
 Advisory committee for the Health Care Opportunities and Policy Grant, 1994-1998.
 Trimester One Curriculum Team, 1995-1998.
 Tenure committee - chairman - Fall 1996 - 1998.
 Chairman - Search committee for a gross anatomist - Spring and Summer 1997.
 University Council - December 1997 - present.
 Academic Advisory Committee (Deans) - December 1997 - present.
 Institutional Review Board (IRB) - December 1997 - 1998.
 Institutional Animal Care and Use Committee (IACUC) - December 1997 - present.
 Research Committee (Chairman) - December 1997 - present.
 Ad-Hoc Committee to develop the nutrition program at The National College of Chiropractic -
 April 1998.
 Residency Committee - December 1997 - present
 Search Committee for a Statistician, Chairman, 1998-1999
 Faculty Development Day Committee, Chairman, Spring 2001
 Task Force for Clinical Procedures, Summer 2002 – present.
 Search Committee for a Dean of Postgraduate Education, 2003
 Search Committee for a Vice President of Academic Affairs, November 2003 – March 2004.
 Steering Committee for addition of new degree programs (Master of Diagnostic Imaging,
 Master of Advanced Clinical Practice, Doctor of Naturopathic Medicine), submission to the
 Higher Learning Commission or the North Central Association of Accreditation.
 Internal Steering Committee: NIH Center Grant, Mechanisms and Effects of Chiropractic
 Manipulation. W. Meeker, PI. National Institutes of Health, National Center for Complementary
 and Alternative Medicine (Grant # U19 AT002006-01), September 22,2003 – May 31, 2006,
 \$2.2 million.
 Accreditation Steering Committee for self-study to and site visit by Higher Learning
 Commission, 2006-2007.
 Search committee for Anatomist, NUHS, 2006-2007.
 Accreditation Steering Committee for self-study to and site visit by Council on Chiropractic
 Education, 2008-2009.
 NUHS Research Task Force, 2010-2011.
 Working Group for Healthy Children for a Healthy Life and University Wellness Initiative,
 Summer 2011 – present.
 Search Committee for Chair of Clinical Sciences, NUHS, St. Petersburg Campus, August
 2011.
 Search committee for Dean of the College of Professional Studies, February 2013.

SERVICE:

TO THE ACADEMY:

Committee work (see section above entitled, "Committees")
 Regular attendance at graduations, convocations, and other activities associated with life at an
 academic institution.
 Speaker at Chiropractic Awareness Day on the topic of the basic sciences (Summer, 1993)
 and the new problem-based learning curriculum (January, 1996; April 1996; July 1996).
 Chairman, Research Administrators' Council, American Association of Chiropractic Colleges,
 1999 – 2002.

TO CHIROPRACTIC AND COMPLEMENTARY AND ALTERNATIVE MEDICINE
PROFESSIONS:

Served as Director at Large to the Ohio State Chiropractic Association (OSCA) (1982, 1983)
Chairman of OSCA Chiropractic Political Action Committee (1982, 1983)
Co-chairman of OSCA convention committee (1980-1983)
Leadership award OSCA, (1982, 1983)

Academic Consortium for Complementary and Alternative Health Care (ACCAHC)
Research Working Group, April 2010-present, Chairman, August 2010-present.
Member of Executive Committee, Spring 2013- present.
Member of Board of Directors, Spring 2013-present.

NUHS Faculty fitness challenge (on development team), May-December 2012.

TO THE COMMUNITY:

Member of Rotary International, Wauseon chapter 1981-1983. Member of Christ's United Methodist Church, Wauseon (taught junior high Sunday School and helped with junior high Youth Fellowship Organization, 1979-1982)

Public Speaking: on chiropractic and a variety of health related topics to classes of first year medical students, Medical College of Ohio at Toledo; the Department of Radiology, Medical College of Ohio at Toledo; Kiwanis Clubs; Rotary Clubs; other service organizations; and Toledo Edison Company employees.

Served as campaign chairman, northwestern Ohio for Dana Reinhart (campaign for governor of Ohio, 1980).

Active in several campaigns for local offices in Wauseon, Ohio and Fulton County, Ohio.

Assistant coach, Batavia Boys Baseball, Rookie-8 League, Summer 1995

Member of Batavia United Methodist Church, Teach Adult Sunday School – Fall 2002 – Spring 2010; usher Fall 1999 – Summer 2010, December 2013 – present (organize all ushers for 2nd service).

Presentation entitled, "Overview of the brain." Given to four 7th grade classes at Batavia Middle School, Batavia, Illinois, April, 2000.

Member of Commission for Programs and Facilities – Batavia School District 101, Batavia, Illinois, Fall 2002

Sierra Mills Homeowner's Association – Board of Directors, Fall 2002 – 2005, President January 2004 – 2005.

Presentation entitled, "How Does Chiropractic Spinal Adjusting Work." Given to Honors Biology Class, Batavia High School, Batavia, Illinois, December, 2004.

Presentation to large Sunday School Class entitled, "From Grace to Heaven with C.S. Lewis," at Flowing Grace Church, North Aurora Illinois, October 14, 2007.

Presentation to large Sunday School class entitled, "Lessons from a Prince," discussing the themes and lessons behind the book and movie "Prince Caspian" by C.S. Lewis, at Flowing Grace Church, North Aurora Illinois, June 8, 2008.

Lazarus House Homeless Shelter – Volunteer: overnight stays (required by law to have two people in shelter during the night, one is a volunteer), interact with the guests, work at food counter, assist as requested, once every 2 months – November 2009 – present.

Take Time for Tots: NUHS interactive activity for healthy eating and nutrition for children. Drs. Baltazar and Anderson and their interns. Lombard Park District, 9:00 AM – 12:00 PM, March 24, 2012.

Promoting Healthy Children for a Healthy Life, Lombard Water Park, 1:00-4:00 PM, June 6, 2012.

ACADEMIC EXPERIENCES:

Supervised viscera anatomy display, Homecoming, 1987, 1988.

Emcee for Chi Rho Sigma's Special Olympics, Summer, 1987.

Participated in teaching special groups of Japanese chiropractors postgraduate anatomy, 1987-1995.

Participated in teaching French and Japanese students anatomy, 1988-1991.

Presented anatomy laboratory to French Medical Physicians, Kansas Legislators, and numerous college and high school groups and many prospective students, 1988-1998.

Four National Board Reviews presented per year for NCC students. Topics: Anatomy of the spine, head, neck, thorax, abdomen, pelvis, and upper extremity 1987-1990.

Approximately two per year 1990-1997. Approximately four per year - two spinal anatomy (two hours each) and two neuroanatomy (four hours each) Fall 1997 - 1999.

Faculty advisor to NCC students, 1987-1997.

Continually updated AT 3103 (Human Head and Neck, Spine, and Viscera lecture) and AT 3103L (laboratory), 1988-1998.

National College Research Colloquium, presentation on feasibility study for clinical trials research at NCC, January 31, 1990.

In-service presentation to ninth and tenth trimester interns entitled, "Keeping anatomy alive in clinical practice", November, 1989, 1990, 1991.

In-service presentation to ninth and tenth trimester interns entitled, "Clinical research at NCC," given at NCCC, CGHS, and Brookfield Clinics, Fall 1989, Spring 1990.

In-service presentation to ninth and tenth trimester interns entitled, "Clinical Anatomy of Spinal Joint Pain," given at NCC Lombard Clinic, August, 1995 (three one-hour sessions).

Leadership Training, Ambassador Program: Academic Consortium for Complementary and Alternative Health Care (ACCAHC), Georgetown University, Georgetown, Virginia, October 23, 2012.

NUHS Admission Focus Group, April 29, 2013.

MODERATING SCIENTIFIC AND EDUCATION SESSIONS:

Chairman of session, "Aging and dementia: Function II." Seventeenth annual meeting of the Society for Neuroscience, New Orleans Louisiana; November 21, 1987.

Chairman of scientific session entitled, "Research from the Laboratory and the Field" at the Association of Chiropractic Colleges/Seventh Research Agenda Conference, March 13-17, 2002, New Orleans, Louisiana.

Moderator of Session entitled, "Subluxation Revisited," Association of Chiropractic Colleges, Eighth Research Agenda Conference, March 12-16, 2003, New Orleans, Louisiana.

Moderator for session entitled: Topics in Chiropractic II. 2010 Fifteenth Annual Association of Chiropractic Colleges Research Agenda Conference, Las Vegas, Nevada, March 18-20, 2010.

Moderator for session entitled: Evidence Based Practice: Transforming the Way We Teach and Practice. 2010 Association of Chiropractic Colleges Research Agenda Conference, Las Vegas, Nevada, March 18-20, 2010.

Moderator for session entitled: Locomotion I. International Symposium for Clinical and Applied Anatomy. Prague, Czech Republic, July 9-11, 2010.

Moderator for session entitled: Topics in Chiropractic Research II. 2011 Sixteenth Annual Association of Chiropractic Colleges Research Agenda Conference, Las Vegas, Nevada, March 17-19.

Moderator for session entitled: Topics in Chiropractic Research III. 2013 Eighteenth Annual Association of Chiropractic Colleges Research Agenda Conference, Washington, DC, March 15-16.

EDITORIAL AND SCIENTIFIC REVIEW ACTIVITY (Papers for Journals, Abstracts for Conferences, Textbooks, Departments):

Clinical review panel, *Spinal Manipulation* (journal), 1989-2000.

Reviewer, *Chiropractic: The Journal of Chiropractic Research and Clinical Investigation*, 1991.

Section Editor - Clinical Anatomy: *Journal of the Neuromusculoskeletal System*, 1993-2002.

Reviewer, *Clinical Anatomy*, 1993-1997, 2004, 2009, 2013.

Reviewer, *Journal of Manipulative and Physiological Therapeutics*, 1995, 2010-present.

Reviewer, *Chiropractic and Osteopathy*, 2008.

Reviewer (abstracts), scientific sessions and workshops of Association of Chiropractic Colleges, 1998-2001, 2013.

Member of eight member Advisory Panel to develop a CD ROM version of the Netter Atlas of Anatomy, Ciba Geigy Corporation, May 22-23, 1995.

Reviewer, book proposal for anatomy text Mosby-Year Book, September 1997.

Reviewer, text "Yearbook of Chiropractic 1999" for Doody Publishing, submitted July 26, 1999.

Reviewer, anatomy text, Garder, Gray, O'Reily and Swenson for possible re-publication; Saunders Publishing, 2000.

Reviewer, anatomy text book submission for Elsevier Health Sciences Publishing, July 2002.

Editorial Board, *Topics in Integrative Health Care*, July 2010 – present.

External Reviewer, Department of Anatomy, Canadian Memorial Chiropractic College, December 16-17, 2008, Toronto, Ontario, Canada.

Reviewer, *BioMed Central, Musculoskeletal Disorders*, 2011.

Reviewer (with T. Grieve), *African Journal of Biotechnology*, 2013.

Reviewer, *Journal of Bodywork and Massage Therapy*, 2013.

Reviewer, Association of Chiropractic Colleges Research Agenda Conference, Summary of Workshops (26), October 2013.

SCIENTIFIC REVIEW ACTIVITY (Grant Applications):

Reviewer for basic science research grants, Foundation for Chiropractic Education and Research, 1988, 1990.

Study section for clinical trials, Foundation for Chiropractic Education and Research, 1989, 1990.

Ad-Hoc Reviewer, Respiratory and Applied Physiology Study Section, National Institutes of Health, November, 2000.

Reviewer for Grant Applications: Foundation for Chiropractic Education and Research: November 2000, May 2001, May 2002, May 2003, November 2003, May 2004, October 2004, May 2005.

Reviewer for Grant Applications: Consortial Center for Chiropractic Research: May 2001.

NIH Special Emphasis Panels and Standing NIH Review Panels (Grant Review Panels), National Center for Complimentary and Alternative Medicine, National Institutes of Health, July 2000, June 2002, June 2003, November, 2003, March 2004, July 2004, March 2005, March 2006, March 2007, February 2008 (alternate chair), October 2008, March 2011, June 2011, October 2011; Musculoskeletal Rehabilitation Sciences Study Section, October 2012 (mail review); March 20-21, 2014; March 31-April 1, 2014 (scheduled).

Chairman NIH/NCCAM Special Emphasis Panels (Grant Review Panels), National Center for Complimentary and Alternative Medicine, National Institutes of Health, Meeting title: Tools and Technologies for Assessing Manual Therapies (SBIR R43), ZAT1 LD-15, April 2007; ZAT1 LD-26, June 2008; ZAT1 RB(03), September 2009; SBIR ZAT1 RB (04), October 2009; Partnerships for CAM Clinical Translational Research (PCCTR), ZAT1 SM 17, SM17 PAR09-066 PCCTR U19 applications, November 2009; PCCTR, ZAT1 SM 20, July 2010; Centers of Excellence for Research on CAM (CERC) for Pain (P01), ZAT1 SM 22, November 2010; ZAT1 HS-03 Neurophysiological and Pain Management with CAM Treatments (R01 and Eureka R01), April 2011; ZAT1 SM-26 Partnerships for Complementary and Alternative Medicine (CAM) Clinical Translational Research (PCCTR) (U19), February, 2012.

ATTENDANCE AT SYMPOSIA/WORKSHOPS (does not include those in which participated by presentation of papers - see abstracts for listing of those meetings):

"Designing computer-based instructional materials", Presented by Department of Educational Design, Health Science Center at San Antonio, December 17-18, 1987.

Annual meetings of International society for the study of back pain, Chicago, Fall 1987; 1988; 1992.

"Lumbar spine state of the art '88," Presented by San Francisco Spine Institute.

"Conservative management of lumbar disc syndromes," Third annual interdisciplinary symposium, Los Angeles College of Chiropractic.

"Electromyography and clinical neurophysiology," Harvard Medical School, November 1989.

"Conservative management of lumbar disc syndromes," Third Annual interdisciplinary symposium, Los Angeles College of Chiropractic, November, 1989.

"Summer session for new academic chairpersons," Kansas State University, July 1990.

Lecture series on selected topics of spinal anatomy given to selected chiropractic college faculty by Australian spinal anatomist Nicholai Bogduk, M.D., Ph.D. Los Angeles College of Chiropractic, November 1990.

"Conservative care of head pain," Fourth annual interdisciplinary symposium, Los Angeles College of Chiropractic, November 1990.

MRI symposium given by Murray Goldstein, M.D., National College of Chiropractic, April 1990, 1991.

Attended two years of five year (540 hour) course in diagnostic imaging, Dennis Skogsbergh, D.C., DACBR, DACBO, instructor (November 1994 - November 1996).

Southern Illinois University School of Medicine Problem-Based Learning Workshop, presented by Howard Barrows, M.D.; Boulder, Colorado; June 10-16, 1995.

Annual Meeting of the American Association of Clinical Anatomists; Mayo Medical School, Rochester, Minnesota; July 19-22, 1995.

Leadership in Collaborative Practice: a Cross-Program Conference for Allied Health, Chiropractic, Geriatric Education Centers, and Interdisciplinary Rural Training Programs. Sponsored by the U.S. Department of Health and Human Services Health Resources and Services Administration, Las Vegas, June 8-11, 1998.

Research Agenda Conference III: Research Training Conference, Washington D.C., June 19-21, 1998.

Association of Chiropractic Colleges Annual Convention, Orlando, Florida, March 17 - 21.

Research Agenda Conference IV-X: Research Training Conference, Chicago IL, July 23-25, 1999, Las Vegas, Las Vegas, New Orleans, New Orleans, Las Vegas, March 2000-2004.

Conference on the Biology of Manual Therapies at the National Institutes of Health (sponsored by the National Center for Complimentary and Alternative Medicine), Bethesda Maryland, June 9-10, 2005.

Fourth Annual CAMera symposium, Building CAM Research: Case by Case, University of Edmonton, Alberta, Canada (sponsored by University of Calgary), June 15, 2005.

NCCAM Stakeholders Meeting (invited to attend), National Institutes of Health, Bethesda, Maryland, June 20, 2007.

NIH Regional Workshop, Chicago Illinois, June 19-20, 2008.

Annual Directors and Research Intensive Institution Partners Meeting for R25 Grants, National Institutes of Health/National Center for Complementary and Alternative Medicine, Bethesda, Maryland, Summer 2007-present. Steering Committee Member 2007, 2012.

Biennial meeting of Academic Consortium of Complimentary and Alternative Health Centers, Reported on Progress of Research Working Group, June 26-28, 2011, Bastyr University, Seattle, Washington.

Biennial meeting of Academic Consortium of Complimentary and Alternative Health Centers, Reported on Progress of Research Working Group, also member of Executive Committee and Board of Directors, June 25-28, 2013, University of Western States, Portland, Oregon.

University of Illinois at Chicago Center for Clinical and Translational Sciences (UIC CCTS) 2013 Summer Program in Clinical and Translational Research Methods, July 9-11, 2013, UIC, Chicago, Illinois.

Prague School of Rehabilitation, Dynamic Neuromuscular Stabilization, Rosemont, Illinois, October 23, 2013.

McKenzie Therapy, Part A, Lumbar region. National University of Health Sciences, Lombard, Illinois, January 18-20.

McKenzie Therapy, Part B, Cervical region. National University of Health Sciences, Lombard, Illinois, February 15-17 (scheduled).

GRANTS:

Pre-doctoral Fellowship Award, Medical College of Ohio, 1984-1986.

Foundation of Chiropractic Education and Research (FCER) Fellowship Award, 1984-1986.

Georgia State University Small Research Grant (#87-024), 1986.

Spinal manipulative therapy for acute low back pain: a randomized controlled trial. J. Triano, P.I., Foundation for Chiropractic Education and Research, \$1,500,000, Clinical Coordinator, April 1989 - August 1990 (when became Chairman of the Department of Anatomy).

Manipulation effects on low back pain: a controlled study of H-reflex functional measures. Appointed Principal Investigator September 1, 1989, Foundation for Chiropractic Education and Research Grant (#87-3-13), \$33,077.00.

Morphometry of the lumbar spine by means of computerized tomography and magnetic resonance imaging. Foundation for Chiropractic Education and Research (FCER), G. Cramer, Principal Investigator, Funded March 1, 1990 (FCER Grant # 89-3-12), \$27,465.00.

Morphometry of the lumbar spine by means of computerized tomography and magnetic resonance imaging (supplemental funding). Foundation for Chiropractic Education and

- Research (FCER – Grant # 91-03-04), G. Cramer, Principal Investigator, Funded October 2, 1991, \$33,974.00.
- Request for equipment. Submitted to the Lincoln College Education and Research Fund, November 9, 1994, \$6,910.29. Not funded.
- Clinical and basic science evaluation of the intervertebral foramina (IVFs) by means of magnetic resonance imaging (MRI): a full description of IVF contents, their appearance on MRI, and the effects of spinal manipulative therapies on IVF dimensions. Foundation for Chiropractic Education and Research (FCER – Grant # 95-03-05), Submitted February 28, 1995, \$161,438.50. Not funded.
- Consultant on grant entitled, “Biomechanics of low back flexion-distraction therapy.” M.R. Gudavalli, Principal Investigator, Bureau of Health Professions, Health Resources and Human Services, Chiropractic Demonstration Projects, Grant #1R18 AH10001-01A1, \$350,000, September 1994 - September 1997.
- The effects of adjusting and positioning on the Z joint: obtaining preliminary data. Principal Investigator, Foundation for Chiropractic Education and Research, \$14,986.50 for one year (submitted September 26, 1997). Not Funded.
- Development and evaluation of a reversible small animal model of the chiropractic subluxation. G. Cramer, Co-Principal Investigator (25%) with Charles Henderson, D.C., Ph.D. of Palmer College of Chiropractic, Foundation for Chiropractic Education and Research, Grant # 97-10-18, \$232,774 for two years (NCC received \$74,970) April 8, 1998 - November 11, 2003.
- Consortial Center for Chiropractic Research, W. Meeker, Principal Investigator, G. Cramer, Co-Investigator (nine co-investigators). National Institutes of Health, Office of Alternative Medicine (Grant # 1 U24 AR45166-01), \$2,500,000 for five years.
- The effects of adjusting and positioning on the Z joint. National Institutes of Health (Grant # 1 R01 AT00123), \$176,056.00. G. Cramer, Principal Investigator, June 6, 2000 – February 28, 2003.
- An investigation of connective tissue bridges originating from the posterior spinal dura: a pilot study. European Chiropractic Union (Grant # A. 00-2), \$15,000. Humphreys, B.K. (PI), Cramer, G.D., Investigator (funded for \$10,000 September 2001).
- An investigation of connective tissue bridges connecting the ligamentum nucha with the posterior spinal dura and the vasculature surrounding the styloid process (supplemental funding for the connective tissue bridges grant but also funding requested for additional research). British Columbia Chiropractic Association, \$5,000. Humphreys, B.K. (PI), Cramer, G.D. and Kenin, S. (funded September 2001).
- Executive Committee for grant entitled, Implementation of a medical curricula for complementary and integrative medicine at Northwestern University School of Medicine. PI, R. Kushner, M.D. Submitted to NIH/NCCAM. Submitted 2000 (as a “Consultant”), Resubmitted October 2001 (as member of Executive Committee). Not funded.
- Allied Health and Chiropractic Joint Research Project. K. Lyons, PI (Thomas Jefferson University College of Health Professions); Project funded by Health Resources and Service Administration, G. Cramer, Member of Advisory Panel. September 1, 2000 – August 31, 2001.
- ACC ChiroLoan Scholarship Program - Administered by EFG Technologies: Scholarship Grant Proposal Title: Development and evaluation of an adjusting instrument/device for use in a small animal model that experimentally emulates the chiropractic subluxation. G. Cramer, Faculty Mentor; Jaeson Fournier, D.C., Research Resident, P.I.; \$15,000. Not Funded.
- Evaluating reversible spinal fixation in biped rats. CNR Henderson, PI; G. Cramer, Co-Investigator. National Institutes of Health, National Center for Complementary and Alternative Medicine (Grant # 1R21 AT00784), July 1, 2003 – June 30, 2005, \$305,930.

- Examining manipulation with a spine fixation model. G. Cramer, Co-Investigator, Chuck Henderson, T. Lim, Co-Leaders; Project 2 of: Mechanisms and Effects of Chiropractic Manipulation. W. Meeker, PI. National Institutes of Health, National Center for Complementary and Alternative Medicine (Grant # U19 AT002006), September 22, 2003 – May 31, 2006, \$296,096.
- Assessing the effects of chiropractic adjusting on posture and reaching. Foundation for Chiropractic Education and Research, L. Marks, PI, G. Cramer, Consultant, submitted September 23, 2003, Proposed period of support June 1, 2004 – May 31, 2006, \$169,834. Not Funded.
- Chiropractic Dosage for Low Back Pain. National Institutes of Health, National Center for Complementary and Alternative Medicine, J. Cambron, PI, G. Cramer, Investigator, submitted February 2004, Proposed period of support December 1, 2004 – June 1, 2006, \$289,737. Not Funded.
- Curriculum Development in Evidence Based Practice. National Institutes of Health, National Center for Complimentary and Alternative Medicine (Grant # 1 R25 AT002872), G. Cramer, Principal Investigator, August 1, 2005 – July 31, 2009, \$756,000.
- Z joint changes in low back pain following adjusting. National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM) and National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) (Grant # 2 R01 AT000123), G. Cramer, Principal Investigator, September 30, 2005 – August 31, 2009 (no-cost extensions to August 31, 2011), \$1,006,972.
- Chiropractic Dosage for Lumbar Stenosis. Foundation for Chiropractic Education and Research (Grant # 04-10-01), J. Cambron, PI, G. Cramer, Investigator, April 1, 2007 – March 31, 2009 (2 years), \$267,670.
- Positive and negative secondary effects of chiropractic and massage treatment. National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM), J. Cambron, Principal Investigator, G. Cramer primary mentor, December 1, 2007 – November 30, 2012, \$540,638. Not Funded.
- Center for Mechanistic Outcomes in CAM Therapies. National Institutes of Health, National Center for Complimentary and Alternative Medicine(NCCAM), G. Cramer, Principal Investigator, submitted August 10, 2007, requested support January 1, 2008 – December 31, 2012, \$2,490,694. Not Funded.
- Correlation of Z Joint Degeneration to Gapping During Spinal Manipulation; Administrative Supplement to Support Thomas Grieve, DC. Administrative Supplements for CAM Practitioner Research Experiences (NOT-AT-07-005). Supplement to the grant entitled, “Z Joint Changes in Low Back Pain Following Adjusting” (“Z Joint Study,” NCCAM # 2R01 AT000123). National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM) (Grant # 3R01 AT000123-05S1), G. Cramer, Principal Investigator, April 1, 2008 – March 31, 2009, \$92,240.
- Sustainable EBP Program in a CAM Institution; competitive renewal application for Curriculum Development in Evidence Based Practice. National Institutes of Health, National Center for Complimentary and Alternative Medicine (Grant # 2R25 AT002872), G. Cramer, Principal Investigator, August 1, 2009 – July 31, 2013, \$863,841.
- Correlation of Z Joint Degeneration to Gapping During Spinal Manipulation; Continuation of Administrative Supplement to Support Thomas Grieve, DC. (full application required). Administrative Supplements for CAM Practitioner Research Experiences (NOT-AT-07-005). Supplement to the grant entitled, “Z Joint Changes in Low Back Pain Following Adjusting” (“Z Joint Study,” NCCAM # 2R01 AT000123). National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM) (Grant # 3R01

AT000123-05,06S1), G. Cramer, Principal Investigator, April 1, 2009 – March 31, 2010, \$89,515.

Loan Repayment Program; J. Cambron – Application to repay student loans. National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM), G. Cramer, Principal Investigator, July 1, 2005 – June 30, 2007, \$70,000; first renewal July 1, 2007 – June 30, 2009, \$70,000; second renewal July 1, 2009 – June 30, 2011.

Loan Repayment Program; T. Grieve – Application to repay student loans. National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM), G. Cramer, Principal Investigator, July 1, 2009 – June 30, 2011, \$70,000. Not Funded.

Does concurrent spinal hypomobility and inflammation cause pain and disability? National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM), C. Henderson, Principal Investigator; G. Cramer, Co-Investigator, December 1, 2009 – November 30, 2012, \$1,674,248, Submitted February 2, 2009. Not Funded.

Relationship of Cavitation to Gapping during Spinal Manipulation; Competitive Revision in response to “NIH Announces the Availability of Recovery Act Funds for Competitive Revision Applications” (NIH NOT-OD-09-058). Competitive revision to the grant entitled, “Z Joint Changes in Low Back Pain Following Adjusting” (“Z Joint Study,” NCCAM # 2R01 AT000123). National Institutes of Health, National Center for Complimentary and Alternative Medicine (NCCAM) (Grant # 3R01 AT000123-06S2), G. Cramer, Principal Investigator, October 1, 2009 – August 31, 2011 with one year no-cost extension), \$514,000.

Center for Integrated CAM Research and Assessment” submitted in response to “Recovery Act Limited Competition: Extramural Research Facilities Improvement Program (C06)” (NIH/NCRR RFA-RR-09-008). National Institutes of Health, National Center for Research Resources (NCRR), Principal Investigator, G. Cramer; Co-Investigators: T. Rohner, R. Mensching; April 1, 2010 – March 31, 2011, \$7,746,690. Not funded.

Does training in evidence based practice change knowledge, attitudes and behaviors of Veterans Health Administration chiropractors? US Veteran’s Health Administration (contract), Principal Investigators, G. Cramer and A. Lisi; Co-Investigators: J. Cambron, M. Chang, E. Cohen, T. Grieve, R. Iwami, C. Wolcott; July 20-21, 2011, \$14,520.

Dissemination of Evidence-Based Practice Education to Chiropractic Providers. National Institutes of Health/National Center for Complementary and Alternative Medicine (NIH/NCCAM Grant # 1R21 AT007547), M. Schneider, Principal Investigator (Cramer Co-Investigator). September 1, 2012 – August 31, 2014.

Pre-doctoral complementary, integrative and translational mentored research training program. National Institutes of Health, National Center for Complimentary and Alternative Medicine, G. Cramer, B. Sullivan, J. Zwanziger Multiple Program Directors, September 1, 2013 – August 31, 2017, \$702,002 (submitted, January 25, 2013, not funded).

PUBLICATIONS:

Cramer, G.; Allen, D. 1987 Quantification of anatomical structures from computerized tomographic (CT) and magnetic resonance imaging (MRI) scans. Measurements using a mechanical planimeter and a digital analyzer. Research Forum, 3: 45-49.

Cramer, G.; Darby, S. 1989 Computer based instruction. Journal of Chiropractic Education 4(3):10-15.

- Cramer, G.; Allen, D.; DiDio, L. 1990 Volume determination of the encephalic ventricles with CT and MRI. *Surgical and Radiologic Anatomy*, 12: 59-64.
- Cramer, G.; Allen, D.; Potvin, W.; DiDio, L. 1990 Comparison of computerized tomography with magnetic resonance imaging (MRI) in the evaluation of encephalic ventricular volume. *Surgical and Radiologic Anatomy*, 12: 135-141.
- Cramer, G.; Allen, D.; Potvin, W.; DiDio, L.; Brinker, R. 1990 Evaluation of encephalic ventricular volume from magnetic resonance imaging scans of thirty-eight human subjects. *Surgical and Radiological Anatomy*, 12: 287-290.
- Cramer, G. 1990 Topic review article: Advanced diagnostic imaging. *Spinal Manipulation*, 6(3): 1-5.
- Cramer, G.; McGregor, M.; Triano, J.; Emde, J. 1992 Generalizability of patient profiles from a feasibility study. *Journal of the Canadian Chiropractic Association*, 36:84-90.
- Cramer, G.; Humphreys, R.; Hondras, M.; McGregor, M.; Triano, J. 1993 The H max/M max ratio as an outcome measure for acute low back pain. *Journal of Manipulative and Physiological Therapeutics*, 16:7-13.
- Triano, J.; McGregor, M.; Cramer, G.; Emde, D. 1993 A comparison of outcome measures for use with back pain patients. *Journal of Manipulative and Physiological Therapeutics*, 16:67-73.
- Cramer, G.; Howe, J.; Glenn, W.; Greenstein, J. 1994 Morphometric comparison of computed tomography to magnetic resonance imaging in the evaluation of the lumbar intervertebral foramina. *Clinical Anatomy*, 7:173-180.
- Greenstein, J.; Cramer, G.; Howe, J.; Glenn, W.; Johnson, S.; Huntoon, R.; Cantu, J.; McGregor, M. 1995 Comparison of 1.5 tesla and 0.35 tesla field strength magnetic resonance imaging scans in the morphometric evaluation of the lumbar intervertebral foramina. *Journal of Manipulative and Physiological Therapeutics*, 18:195-202.
- Cramer, G.; Darby, S. 1996 Clinical pathoanatomy related to low back pain. *Topics in Clinical Chiropractic*, 3:1-8.
- Brennan, P.; Cramer, G.; Cullum, M.; Gudavalli, M.; Kirstukas, S.; Tuck, N. 1996 Annotated bibliography of basic science research related to chiropractic. *Proceedings of the National Workshop to Develop the Chiropractic Research Agenda*. Sponsored by U.S. Department of Health and Human Services - Health Resources and Services Administration, Washington D.C., July 12-14.
- Brennan, P.; Cramer, G.; and Kirstukas, S.; Cullum, M.E. 1997 Basic science research in chiropractic: state-of-the-art and recommendations for a research agenda. *Journal of Manipulative and Physiological Therapeutics*, 20:150-168.
- Brennan, P.; Cramer, G.; Cullum, M.; Gudavalli, M.; Kirstukas, S.; Tuck, N. 1997 Updated annotated bibliography of basic science research related to chiropractic. *Proceedings of the National Workshop to Develop the Chiropractic Research Agenda II*. Sponsored by U.S. Department of Health and Human Services - Health Resources and Services Administration, Washington D.C.
- Cramer, G.D. 1998 Anatomy of the cervical spine with respect to head pain. *Topics in Clinical Chiropractic*, 5:1-10.
- Cramer, G.D.; Scott, C.; Tuck, N. 1998 The holey spine: A summary of the history of scientific investigation of the intervertebral foramina. *Chiropractic History*, 18:13-24.
- Tuck, N.R. Jr.; Simper, D.; Schliesser, J.; Cramer, G.D. 2000 Evaluation of diagnostic procedures for carpal tunnel syndrome. *Journal of the Neuromusculoskeletal System*, 8:1-9.
- Cramer, G.D.; Tuck, N.R.Jr.; Knudsen, T.; Fonda, S.; Schliesser, J.S.; Fournier, J. 2000 The effects of side posture positioning and side posture adjusting on the lumbar zygapophysial

- joints as evaluated by magnetic resonance imaging: a before after trial with randomization. *Journal of Manipulative and Physiological Therapeutics*, 23:380-394.
- Cramer, G.; 2001 The clinical anatomy of spinal adjusting. *DC Tracts* 13(1):4-5 (also includes audio tape).
- Cramer, G.; Skogsbergh, D.; Bakkum, B.; Winterstein, J.; Yu, S.W.; Tuck, N.R.; 2002 Evaluation of transforaminal ligaments by magnetic resonance imaging. *Journal of Manipulative and Physiological Therapeutics*, 25:199-208.
- Cramer, G.; Cantu, J.; Greenstein, J.; Dorsett, R.; Gongaware, K; Frank, P.; Skogsbergh, D.R.; 2002 Oblique MRI of the cervical intervertebral foramina: a comparison of three techniques. *Journal of the Neuromusculoskeletal System*, 10:41-51.
- Cramer, G.D.; Gregerson, D.M.; Knudsen, J.T.; Hubbard B.B.; Ustas, L.M.; Cantu, J.A., 2002 The effects of side posture positioning and spinal adjusting on the lumbar Z joints: a randomized controlled trial of 64 subjects. *Spine*, 27:2459-2466.
- Humphreys, B.K.; Kenin, S.; Hubbard, B.; Cramer, G.D. 2003 Investigation of connective tissue attachments to the cervical spinal dura mater. *Clinical Anatomy*, 16:152-159.
- Cramer, G.D.; Cantu, J.A.; Dorsett, R.D.; Greenstein, J.S.; McGregor, M.; Howe, J.E.; Glenn, W.V. 2003 Dimensions of the lumbar intervertebral foramina as determined from the sagittal plane magnetic resonance imaging scans of 95 normal subjects. *Journal of Manipulative and Physiological Therapeutics*, 26:160-170.
- Cramer, G.D.; Fournier, J.T.; Henderson, C.N.R.; Wolcott, C.C. 2004 Degenerative changes following spinal fixation in a small animal model. *Journal of Manipulative and Physiological Therapeutics* 27:141-154.
- Cramer, G.D.; Budgell, B.; Henderson, C.N.R.; Khalsa, P.; Pickar, J. 2006 Basic science research related to chiropractic spinal adjusting: the state of the art and recommendations revisited. *Journal of Manipulative and Physiological Therapeutics* 29:726-761.
- Cambron, J.B.; Cramer, G.D.; Winterstein, J. 2007 Patient perceptions of chiropractic treatment for primary care disorders. *Journal of Manipulative and Physiological Therapeutics* 30:11-16.
- Henderson, C.N.R.; Cramer, G.D.; Zhang Q.; DeVocht, J.W.; Fournier, J.T. 2007 Introducing the external link model (ELM) for studying spine fixation and misalignment: part 1, need, rationale, and applications. *Journal of Manipulative and Physiological Therapeutics* 30:239-245.
- Henderson, C.N.R.; Cramer, G.D.; Zhang Q.; DeVocht, J.W.; Fournier, J.T. 2007 Introducing a new animal model for studying spine fixation and misalignment: part 2, biomechanical features. *Journal of Manipulative and Physiological Therapeutics* 30(4):279-294.
- Bakkum, B.W.; Hong, S.P.; Henderson, C.N.R.; Cramer, G.D 2007 Preliminary morphologic evidence that vertebral hypomobility induces synaptic plasticity in the spinal cord. *Journal of Manipulative and Physiological Therapeutics* 30:336-342.
- Henderson, C.N.R.; Cramer, G.D.; Zhang Q.; DeVocht, J.W.; Sozio, R.S.; Fournier, J.T. 2009 Introducing the external link model (ELM) for studying spine fixation and misalignment: current procedures, costs, and failure rates. *Journal of Manipulative and Physiological Therapeutics* 32:294-302.
- Cambron, J.A.; Dexheimer, J.M.; Chang, M.; Cramer, G.D. 2010 Recruitment methods and costs for a randomized, placebo-controlled trial of chiropractic care for lumbar spinal stenosis: a single-site pilot study. *J Manipulative Physiol Ther* 33:56-61.
- Cramer, G.D.; Cantu, J.A.; Pocius, J.D.; McKinnis, R.A.; Cambron, J.A. 2010 Reliability of zygapophysial joint space measurements made from MRI scans of acute low back pain subjects: comparison of two statistical methods. *Journal of Manipulative and Physiological Therapeutics* 33:220-225.

- Cramer, G.D.; Henderson, C.N.R.; Little, J.W.; Daley, C.; Grieve, T.J. 2010 Zygapophysial joint adhesions following induced hypomobility. *Journal of Manipulative and Physiological Therapeutics* 33(7):508-518.
- Cramer, G.D.; Ross, K.; Pocius, J.; Cantu, J.A.; Luptook, E.; Fergus, M.; Gregerson, D.; Selby, S.; Raju, P.K. 2011 Evaluating the relationships among cavitation, zygapophyseal joint gapping, and spinal manipulation: an exploratory case series. *Journal of Manipulative and Physiological Therapeutics* 34(1):2-14.
- Cambron, J.A.; Jedlicka, J.; Iannelli, G.C.; Dexheimer, J.; Cramer, G.D. 2011 Patients' perception of care: comparing placebo and manual therapy within a pilot study. *Topics in Integrative Health Care* 2(2) ID:2.2003.
- Cramer, G.D.; Ross, K.; Raju, P.K.; Cambron, J.; Dexheimer, J.; Bora, P.; McKinnis, R.; Selby, S.; Habeck, A. 2011 Distribution of cavitations as identified with accelerometry during lumbar spinal manipulation. *Journal of Manipulative and Physiological Therapeutics* 34(9):572-583.
- Cramer, G.D.; Ross, K.; Raju, P.K.; Cambron, J.; Cantu, J.A.; Bora, P.; Dexheimer, J.; McKinnis, R.; Habeck, A.; Selby, S.; Pocius, J.; Gregerson, D. 2012 Quantification of cavitation and gapping of lumbar zygapophyseal joints during spinal manipulative therapy. *Journal of Manipulative and Physiological Therapeutics* 35(8):614-621.
- Cramer, G.D.; Cambron, J.A.; Cantu, J.A.; Dexheimer, J.; Pocius, J.D.; Gregerson, D.; Fergus, M.; McKinnis, R.A.; Grieve, T.J. 2013 MRI Zygapophysial Joint Space Changes (Gapping) in Low Back Pain Patients following Spinal Manipulation and Side Posture Positioning: A Randomized Controlled Mechanisms Trial with Blinding. *Journal of Manipulative and Physiological Therapeutics* 36(4):203-217.

PUBLICATIONS SUBMITTED:

- Little, J.; Grieve, T.; Cramer, G.D.; Rich, J.; Luptook, E.; Stiefel, J.; Linaker, K. 2012 Quantifying osteoarthritic changes of the zygapophysial joints from x-rays: a reliability study. (submitted to *Journal of Manipulative and Physiological Therapeutics*)
- Sullivan, B.M.; Furner, S.E.; and Cramer, G.D. 2013 Development of a Student Mentored Research Program between a Complementary and Alternative Medicine University and a Traditional, Research Intensive University (submitted to *Acad Med*).
- Sullivan, B.M.; Pocius, M.S.; Wolcott, D.C.; and Cramer, G.D. 2013 Curricular interventions impact evidence based practice (EBP) skills, attitudes, clinical behaviors and patient care outcomes in a clinically integrated complementary and alternative medicine (CAM) journal club (submitted to *Medical Teacher*).
- Cambron, J.A.; Schneider, M.; Dexheimer, J.; Iannelli, G.C.; Chang, M.; Jedlicka, J.; Terhorst, L.; Cramer, G.D. 2014 A pilot study of flexion-distraction dosage for chiropractic treatment of lumbar spinal stenosis. *Journal of Manipulative and Physiological Therapeutics* (submitted).

PUBLICATIONS IN PREPARATION:

- Cramer, G.D.; Guiltinan, J.; Laird, S.; Maiers, M.; George, J.; Goertz, C.; Furner, S.E.; Kreitzer, M.J.; Dexheimer, J.M.; Coon, S. Benefits, Challenges And Culture Change Related To Collaborations Between Complementary And Alternative Medicine And Traditional Research-Intensive Institutions. (submitted to R25 editorial board)
- Cramer GD; Bora P; Ross K; Selby S. Assessing sound and vibration from Z joints during motion and spinal manipulation.
- Sullivan, B.M.; Pocius, M.S.; and Cramer, G.D. Pivoting a Faculty Development Program Enhances Evidence-Based Practice, Research Utilization and Knowledge Translation, and Impacts Institutional Research Culture (planned submission to *Academic Medicine*).

DISSERTATION AND BOOKS:

- Cramer, G. 1986 Volumetric determinations of the encephalic ventricles with magnetic resonance imaging. Doctoral Dissertation, University Microfilms, Ann Arbor, 310pp.
- Cramer, G.; Darby, S. 1995 Basic and clinical anatomy of the spine, spinal cord, and ANS. Mosby Year Book, St. Louis, 293 illustrations, 441pp. Translated into Japanese, August, 2000.
- Cramer, G.; Darby, S. 1995, 2005 (second printing, 2nd Ed 2009), Basic and clinical anatomy of the spine, spinal cord, and ANS. 1st-2nd Editions, Elsevier/Mosby, St. Louis, 475 illustrations, 652pp.
- Cramer, G.; Darby, S. 2014 Clinical anatomy of the spine, spinal cord, and ANS. 3rd Edition, Elsevier/Mosby, St. Louis, 559 illustrations, 672pp.

CHAPTERS IN BOOKS:

- Triano, J.; Cramer, G. 1990 Anatomy and biomechanics of the low back for the patient. In: Conservative management of low back pain. White, A. and Anderson, J., eds., Williams and Wilkins, Baltimore.
- Darby, S.; Cramer, G. 1994 Chapter 3: Pain generators and pain pathways of the head and neck. In: Curl, D. ed., Chiropractic approach to head pain. Williams and Wilkins, Baltimore, pp.55-73.
- Cramer, G.; Darby, S. 1995 Chapter 2: Clinical anatomy of spinal subluxation. In: Gatterman, M. ed., Foundations of chiropractic: subluxation. Mosby Year Book, St. Louis, pp.18-34.
- Cramer, G. 1996 Section of Chapter 5: Clinical anatomy of the lumbar region and sacroiliac joints. In: Greenstein, G. ed., Clinical assessment of neuromusculoskeletal disorders. Mosby Year Book, St. Louis, pp. 97-113.
- Ro, C.; Cramer, G. 1996 Section of Chapter 5: Clinical anatomy of the sacroiliac joint. In: Greenstein, G. ed., Clinical assessment of neuromusculoskeletal disorders. Mosby Year Book, St. Louis, pp. 113-116.
- Cramer, G.; Gudavalli, R.; Skogsbergh, D. 2000 Functional anatomy of the cervical region. In: Herzog, W. ed., Clinical Biomechanics of the Spine. Churchill Livingstone, Philadelphia, pp. 50-91.
- Cramer, G.D. 2001 Clinical anatomy of cranio-cervical syndrome. Chapter 1 In: Vernon, H. ed., The Cranio-Cervical Syndrome. Butterworth Heinemann, Oxford, England, pp. 1-13.
- Cramer, G.; Darby, S. 2005 Chapter 3: Clinical anatomy of spinal subluxation. In: Gatterman, M. ed., Foundations of chiropractic: subluxation. 2nd Ed. Elsevier/Mosby, St. Louis, pp.30-46.
- Boucher, P.; Cramer, G.; Darby, S.; Giggelman, G.; Neill, A.; Zaki, I 2006 Spinal anatomy. Section Two In: Johnson CD, Green BN, Davis J, Cleveland C eds. Mosby's review questions for the NBCE examination: parts I and II. Elsevier/Mosby Year Book, St. Louis, pp. 53-108.
- Cramer, G. 1995, 2005, 2013 General characteristics of the spine. Chapter 2 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 15-64.
- Bakkum, B. and Cramer, G. 1995, 2005, 2013 Muscles that influence the spine. Chapter 4 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 98-134.
- Cramer, G. 1995, 2005, 2013 The cervical region. Chapter 5 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 135-209.

- Cramer, G. 1995, 2005, 2013 The thoracic region. Chapter 6 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 210-245.
- Cramer, G. 1995, 2005, 2013 The lumbar region. Chapter 7 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Mosby Year Book, St. Louis, pp. 246-311.
- Cramer, G. and Ro CS 1995, 2005, 2013 The sacrum, sacroiliac joint and coccyx. Chapter 8 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 312-340.
- Cramer, G.; Darby, S.; and Fryszta, R (2nd and 3rd eds). 1995, 2005, 2013 Pain of spinal origin. Chapter 11 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 508-540.
- Cramer, G. and Yu, S.W. 2005, 2013 Unique anatomic features of the pediatric spine. Chapter 13 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 2nd & 3rd Editions, Elsevier/Mosby, St. Louis, pp. 566-585.
- Cramer, G. and Bakkum, B. (Stathopoulos, P. first 2 editions) 1995, 2005, 2013 Microscopic anatomy of the zygapophysial joints, intervertebral discs, and other major tissues of the back. Chapter 14 In: Cramer, G.; Darby, S. Clinical anatomy of the spine, spinal cord, and ANS. 1st-3rd Editions, Elsevier/Mosby, St. Louis, pp. 586-637.

FOREWORD FOR BOOK:

- Cramer, G. 2005 Forward. In: Lederman, E. 2005 The science and practice of manual therapy. 2nd Edition Elsevier/Churchill Livingstone, London, 305 pp.

PUBLISHED ABSTRACTS:

- Cramer, G.; Allen, D.; Potvin, W.; Chakeres, D.; Brinker, R. 1986 Volumetric determinations of the cerebral ventricles with magnetic resonance imaging (MRI). Society for Neuroscience Abstracts, 12: 102.
- Cramer, G.; Allen, D. 1986 Area, volume and perimeter determinations of anatomical structures on computerized tomography (CT) and magnetic resonance imaging (MRI) using a digital analyzer. Proceedings of the Fifth Annual Conservative Health Science Research Conference, pp. 57.
- Cramer, G.; Allen, D.; DiDio, L. 1987 Volumetric determinations of the encephalic ventricles with computerized tomography (CT) and magnetic resonance imaging (MRI). Anatomical record, 218: 28a.
- Cramer, G.; Allen, D.; DiDio, L.; Potvin, W.; Brinker, R. 1987 Quantification of cerebral ventricular volume using magnetic resonance imaging (MRI) in thirty-nine human subjects without apparent pathology. Society for Neuroscience Abstracts, 13: 1627.
- Cramer, G.; Allen, D.; DiDio L. 1988 Quantification of encephalic ventricular head phantoms with computerized tomography (CT) and magnetic resonance imaging (MRI). Proceedings of the Eighth International Symposium on Morphological Sciences, 8: 74.
- DiDio, L.; Cramer, G.; Allen, D. 1988 Quantification of the encephalic ventricles in thirty-nine human subjects with computerized tomography (CT) and magnetic resonance imaging (MRI). Proceedings of the Eighth International Symposium on Morphological Sciences, 8: 99.
- Cramer, G.; Allen D. 1988 Comparative measurements of anatomical structures from computerized tomographic (CT) and magnetic resonance imaging (MRI) scans. Application to the spine. Proceedings of the International Chiropractic Congress and The Spine and Low Back Pain Symposium. Sydney, Australia, page 11.

- Bachop, W.; Cramer, G. 1988 The transforaminal ligament at the L5/S1 intervertebral foramen. Proceedings of the International Chiropractic Congress and The Spine and Low Back Pain Symposium. Sydney, Australia, page 6.
- Cramer, G.; Darby, S. 1989 Using computers to teach: computer-based instructional methods. Proceedings of the Congress of Chiropractic Educators, Davenport, April 1989.
- Cramer, G.; Kahler, J.; Allen, D. 1989 Morphometry of the intervertebral foramen, vertebral bodies, and intervertebral discs from magnetic resonance imaging (MR) scans. Proceedings of the 1989 International Conference of Spinal Manipulation. Washington, D.C., pp. 127-136.
- Cramer, G.; Allen, D.; Kahler, J. 1989 Morphometry of the intervertebral discs and other anatomical structures of the spine from sagittal magnetic resonance scans. *Anatomical Record*, 289: 28a.
- McGregor, M.; Cramer, G.; Triano, J.; Emde, D.; Hondras, M.; Emde, J.; Cerwin E. 1990 Clinical trials of chiropractic care: a feasibility study. Proceedings of the 1990 International Conference on Spinal Manipulation, pp. 339-341.
- Byrd, R.; Cramer, G.; Kahler, J.; Leaman, S. 1990 Reliability of magnetic resonance imaging for morphometry of the intervertebral foramen. Proceedings of the 1990 International Conference of Spinal Manipulation, pp. 79-82.
- Cramer, G.; Hondras, M.; Humphreys, R.; Triano, J. 1990 The H/M ratio as an outcome measure of chiropractic treatment efficacy in acute low back pain. Proceedings of the 1990 International Conference of Spinal Manipulation, pp. 71-73.
- Cramer, G.; Howe, J.; Glenn, W.; Greenstein, J.; Marx, P.; Johnson, S.; Huntoon, R.; Cantu, J.; Emde, J.; Aoyo, M. 1991 Comparison of computed tomography to magnetic resonance imaging in evaluation of the intervertebral foramen. Proceedings of the 1991 International Conference of Spinal Manipulation, pp. 186-190.
- McGregor, M.; Cramer, G.; Triano, J.; Emde, J. 1991 Generalizability of results from randomized controlled clinical trials. Proceedings of the 1991 International Conference of Spinal Manipulation, pp. 293-296.
- Cramer, G.; Bachop, W. 1991 A ligamentous obstruction at the L5/S1 intervertebral foramen. *Clinical Anatomy* 4: 67.
- Cramer, G.; Howe, J.; Glenn, W.; Greenstein, J.; Johnson, S.; Huntoon, R.; Cantu, J.; Marx, P.; Aoyo, M.; Macken, D. 1992 Lumbar intervertebral foramen dimensions from thirty-seven human subjects as determined by magnetic resonance imaging. Proceedings of the 1992 International Conference of Spinal Manipulation, pp. 3-5.
- Greenstein, J.; Cramer, G.; Howe, J.; Glenn, W.; Johnson, S.; Huntoon, R.; Cantu, J.; Marx, P.; Macken, D. 1992 Comparison of 1.5 and 0.35 Tesla field strength magnetic resonance scans in the morphometric evaluation of the lumbar intervertebral foramen. Proceedings of the 1992 International Conference of Spinal Manipulation, pp. 9-11.
- Cramer, G.; Howe, J.; Glenn, W.; Greenstein, J. 1992 Comparative evaluation of the lumbar intervertebral foramen by computed tomography and magnetic resonance imaging. *Clinical Anatomy* 5: 238.
- Cramer, G.; Cantu, J.; Greenstein, J.; Dorsett, R.; Gongaware, K; Frank, P. 1993 The accuracy of magnetic resonance imaging in determining the vertical dimensions of the cervical intervertebral foramina. Proceedings of the 1993 International Conference of Spinal Manipulation, pp. 38-40.
- Cramer, G.; Howe, J.; Glenn, W.; Cantu, J.; Dorsett, R. 1993 Normal lumbar intervertebral foramina size of living human subjects as determined by magnetic resonance imaging. Proceedings of the 1993 World Chiropractic Congress, London, England p.8-1, 2.

- Cramer, G.; Howe, J.; Glenn, W.; Dorsett, R.; Cantu, J.; Richeson, R.; Fleck, D.; Berthiaume, R.; Skogsbergh D. 1994 The accuracy of computerized tomography, 0.35 tesla and 0.2 tesla magnetic resonance imaging scans in determining the horizontal dimensions of the lumbar intervertebral foramina. Proceedings of the 1994 International Conference of Spinal Manipulation, pp. 21-23.
- Cramer, G.; Howe, J.; Glenn, W.; Dorsett, R.; Gongaware, K.; Dellaripa, J.; Rongaus, J.; Aoyo, M. 1994 The size of the lumbar intervertebral foramina as determined from horizontal images of magnetic resonance imaging scans. Proceedings of the 1994 International Conference of Spinal Manipulation, pp. 46-48.
- Dorsett, R.; Cramer, G.; Howe, J.; Glenn, W.; Gongaware, K.; Dellaripa, J.; Rongaus, J.; Aoyo, M. 1994 Lumbar vertebral canal dimensions of eighty-eight normal subjects evaluated by 0.35 tesla magnetic resonance imaging. In: Rosner T, editor. Proceedings of the 1994 International Conference on Spinal Manipulation: Proceedings of the International Conference on Spinal Manipulation; 1994 June 10-11; Palm Springs, California, USA. Arlington: Foundation for Chiropractic Education and Research; 1994. p. 96-8.
- Cantu, J.; Cramer, G.; Dorsett, R.; Gongaware, K.; Frank, P.; Skogsbergh D.; Greenstein, J. 1994 Magnetic resonance imaging of the cervical intervertebral foramina: comparison of two techniques. Proceedings of the 1994 International Conference of Spinal Manipulation, pp. 101-103.
- Cramer, G.; Howe, J.; Glenn, W.; Dorsett, R. 1994 Lumbar intervertebral foramina size from horizontal MRI scans. Proceedings of the XIV Federative International Congress of Anatomy p. 159.
- Cramer, G.; Howe, J.; Glenn, W.; Cantu, J.; Dorsett, R. 1995 Dimensions of the lumbar intervertebral foramina as determined from the magnetic resonance imaging scans of 75 normal subjects. *Clinical Anatomy*, 8:155.
- Cramer, G.; Bakkum, B.; Skogsbergh, D.; Tuck, N.R.; Keyes, M.; Floyd, J. 1996 Identification of accessory ligaments of the lumbar intervertebral foramina by means of magnetic resonance imaging. Proceedings of the Conference on Research and Education (CORE), San Diego, June 13-15, pp. 144-146.
- Roberts, V.; Tuck, N.R.; Cramer, G. 1996 The need for basic science research in the chiropractic profession. Proceedings of the Conference on Research and Education (CORE), San Diego, June 13-15, pp. 149.
- Tuck, N.R.; Simper, D.; Cramer, G. 1996 Evaluation of diagnostic procedures for carpal tunnel syndrome. Proceedings of the Conference on Research and Education (CORE), San Diego, June 13-15, pp. 147-148.
- Cramer, G.; Bottcher, L.; Tuck, N.R.; Roberts, V.; Sapira, I.; Scott, C.; Floyd, J.; Skogsbergh, D. 1996 Reliability Study for Measurements Made from MRI Scans to Evaluate Anatomic Changes Pre- and Post-Spinal Manipulation. Proceedings of the 1996 International Conference on Spinal Manipulation (ICSM), Bournemouth, England, October 17-19, pp. 155-157.
- Cramer, G.; Skogsbergh, D.; Tuck, N.R.; Cantu, J.; Floyd, J.; Allen, S.; Fonda, S.; Pike, T. 1996 The effects of spinal manipulative therapy on the L5 intervertebral foramina as evaluated by magnetic resonance imaging. Proceedings of the 1996 International Conference on Spinal Manipulation (ICSM), Bournemouth, England, October 17-19, pp. 158-160.
- Cramer, G.; Skogsbergh, D.; Winterstein, J.; Bakkum, B.; Yu, S.W.; Tuck, N.R.; Floyd, J.; Keyes, M. 1996 Accuracy and reliability of the identification of transforaminal ligaments of the lumbar intervertebral foramina by means of magnetic resonance imaging. Proceedings of the 1996 International Conference on Spinal Manipulation (ICSM), Bournemouth, England, October 17-19, pp. 131-133.

- Tuck, N.R.; Cramer, G.; Skogsbergh, D.; Cantu, J.; Floyd, J.; Scott, C.; Keyes, M. 1996 Spinal and paravertebral tissue simulation for research on magnetic resonance imaging. Proceedings of the 1996 International Conference on Spinal Manipulation (ICSM), Bournemouth, England, October 17-19, pp. 161-163.
- Gudavalli, M.R.; Cox, J.M.; Baker, J.A.; Cramer, G.D.; Patwardhan, A.G. 1997 Intervertebral disc pressure changes during the flexion-distraction procedure for low back pain. Proceedings of the International Society for the Study of the Lumbar Spine, Singapore, June 2-6, pp. 88-89.
- Cramer, G.; Giles, E.; Jiang, B.; Metcalf, R.; Surlekar, S.; Swenson, R.; Whitehead, J. 1997 Steps used to develop the first trimester of a new problem-based learning curriculum. The Journal of Chiropractic Education, 10: S48.
- Cramer, G.; Bakkum, B.; Gudavalli, R. 1997 A spinal anatomy laboratory designed for a problem-based learning curriculum. The Journal of Chiropractic Education, 10: S47.
- Cramer, G. 1997 Teaching spinal anatomy in a problem-based learning curriculum: methods used to teach and experiences from the first trimester. The Journal of Chiropractic Education, 10: S9.
- Kiely, M.; Tuck, N.; Floyd, J.; Wilding, A.; Cramer, G. 1997 Anatomic and magnetic resonance image correlation of the lateral pterygoid muscle attachment to the temporomandibular joint. Proceedings of the 1997 Annual Meeting of the Federation of Associations and Societies of Experimental Biology, New Orleans, LA, April 6-9.
- Tuck, N.; Kiely, M.; Wilding, M.; Cramer, G.; Weisberg, J.; Webster, S.; Kenin, S. 1997 Quantification of the superior head of the lateral pterygoid muscle attachment to the temporomandibular joint complex. Proceedings of the Fourteenth Annual Meeting of the American Association of Clinical Anatomists, Honolulu, Hawaii, July 9-11, p. 78.
- Gudavalli, M.R.; Cox, J.M.; Baker, J.A.; Cramer, G.D.; Patwardhan, A.G. 1997 Intervertebral disc pressure changes during a chiropractic procedure. Proceedings of the 1997 Meeting of the International Mechanical Engineering Congress and Exhibition Dallas, Texas, November 16-21. Advances in Bio-engineering, BED 36:215-216.
- Cramer, G.D.; Tuck, N.R.; Sapira, I.; Wilding, A.L.; Knudsen, T. 1998 Morphometric evaluation of the anterior longitudinal ligament on cadaveric spines and by means of magnetic resonance imaging. Association of Chiropractic Colleges Conference on Chiropractic Clinical Research, March 12-14, Las Vegas, Nevada. Abstract published in: Journal of Chiropractic Education, 11:141.
- Gudavalli, M.R.; Cox, J.M.; Cramer, G.D.; Jedlicka, J. 1998 Computer and anatomy based animation as a tool for demonstrating the effects of the flexion-distraction procedure. Association of Chiropractic Colleges Conference on Chiropractic Clinical Research, March 12-14, Las Vegas, Nevada. Abstract published in: Journal of Chiropractic Education, 11:126-127.
- Meeker, W.; Long, C.; Adams, A.; Bronfort, G.; Cramer, G.; Hondras, M.; Nyiendo, J.; Pickar, J.; Pope, M. 1998 Establishing the consortial center for chiropractic research. Proceedings of the International Conference on Spinal Manipulation July 16-19, pp. 157 - 159.
- Cramer, G.D.; Wilding, A.L.; Sapira, I.; Tuck, N.R.; Knudsen, T.; Yu, S. 1998 Morphometric evaluation of the posterior longitudinal ligament on cadaveric spines by means of magnetic resonance imaging. Proceedings of the Inaugural Scientific Conference of the Consortium of Canadian Chiropractic Research Centers, University of Calgary, Alberta, Canada, November 14-15, p. 37.
- Gudavalli, M.R.; Cox, J.M.; Cramer, G.D.; Baker, J.A.; Patwardhan, A.G. 1998 Intervertebral disc pressure changes during low back treatment procedures. Advances in Bioengineering, BED-Vol.39, pp. 187-188. Presented at the 1998 American Society of Mechanical Engineers

- International Mechanical Engineering Congress and Exposition, November 15-20, Anaheim, California.
- Wang, J.; Maniwa, S.; Winterstein, J.; Cramer, G.C.; Glimcher, M.J. 1999 Composition of the corporotransverse ligaments of the lumbar L5-S1 IVFs. 1999 Proceedings of the Fifth World Federation of Chiropractic Congress, May 18-22, Auckland, New Zealand, pp. 150-151.
- Cramer, G.D.; Fournier, J.T.; Henderson, C.N.R. 1999 Evaluation of the success of a small animal model of the vertebral subluxation complex by means of x-ray, visual inspection, and dissection microscopy. Fifth World Federation of Chiropractic Congress, May 18-22, Auckland, New Zealand, pp. 132-133.
- Daley, C.J.; Cramer, G.C.; Henderson, C.N.R. 1999 Method of evaluation of the effects of spinal fixation of three contiguous lumbar segments of a small animal model of the vertebral subluxation complex by means of light microscopy. Fifth World Federation of Chiropractic Congress, May 18-22, Auckland, New Zealand, pp. 211-212.
- Cramer, G.D.; Tuck, N.R.Jr.; Fonda, S.; Knudsen, T.; Schliesser, J.S.; Patel, P. 1999 Evaluation of the lumbar zygapophysial joints by means of magnetic resonance imaging before and after spinal adjusting. Fifth World Federation of Chiropractic Congress, May 18-22, Auckland, New Zealand, pp. 187-188.
- Henderson, C.N.R.; Cramer, G.D.; Zhang, Q. 1999 Development of a reversible small animal model of the chiropractic subluxation. Fifth World Federation of Chiropractic Congress, May 18-22, Auckland, New Zealand, pp. 140-141.
- Humphreys, B.K.; Kenin, S.; Hubbard, B.; Cramer, G.D. 2000 An investigation of connective tissue bridges originating from the posterior spinal dura: a pilot study. *Journal of Chiropractic Education*, 14:8-9.
- Cramer, G.D.; Fournier, J.T.; Henderson, C. 2000 Zygapophysial joint changes following spinal fixation. Proceedings of the 2000 International Conference on Spinal Manipulation, September 21-23, Minneapolis, Minnesota, pp. 85-87.
- Ginsburg, C.D.; Daley C.J.; Cramer G.D.; Henderson, C.N.R. 2000 Light microscopic changes of the zygapophysial joints following spinal fixation. Proceedings of the 2000 International Conference on Spinal Manipulation, September 21-23, Minneapolis, Minnesota, pp. 187-189.
- Kenin, S.; Humphreys, B.K.; Hubbard, B.; Cramer, G.D. 2000 Attachments from the spinal dura to the ligamentum nucha: incidence, MRI appearance, and strength of attachment. Proceedings of the 2000 International Conference on Spinal Manipulation, September 21-23, Minneapolis, Minnesota, pp. 202-204.
- Henderson, C.N.R.; DeVocht, J.; Kirstukas, S.J.; Cramer, G.D. 2000 In vivo biomechanical assessment of a small animal model of the vertebral subluxation. Proceedings of the 2000 International Conference on Spinal Manipulation, September 21-23, Minneapolis, Minnesota, pp. 193-195.
- Gudavalli, M.R.; Cox, J.M.; Cramer, G.D.; Baker, J.A.; Patwardhan, A.G. 2000 Vertebral motions during flexion-distraction treatment for low back pain. 2000 Advances in Bioengineering. Presented at The 2000 ASME International Mechanical Engineering Congress and Exposition. November 5-10, Orlando, Florida, 48:129-130.
- Gudavalli, M.R.; Cox, J.M.; Cramer, G.D.; Baker, J.A.; Patwardhan, A.G. 2000 Vertebral motions during flexion-distraction treatment for low back pain. International Scientific Conference on Complementary, Alternative and Integrative Medicine Research. May 17-19, San Francisco, California.
- Meeker, W.; Hawk, C.; Long, C.; Bronfort, G.; Cramer, G.; Pickar, J.; Adams, A.; Hondras, M.; Haas, M. 2001 Multidisciplinary collaboration and scientific integration: Role and progress

- of the Consortial Center for Chiropractic Research. Proceedings of the 129th annual meeting of the American Public Health Association, October 21-25, Atlanta, Georgia.
- Cramer, G.D.; Fournier, J.T.; Henderson, C. 2002 Degenerative changes of the articular processes following spinal fixation. Association of Chiropractic Colleges/Seventh Research Agenda Conference, March 13-17, New Orleans, Louisiana, *The Journal of Chiropractic Education*, 16:7.
- Cramer, G.D.; Gregerson, D.M.; Knudsen, J.T.; Hubbard, B.B.; Ustas, L.M.; Cantu, J.A. 2002 The effects of side posture positioning and spinal adjusting on the Z Joints. Proceedings of the Annual Meeting of the International Society for the Study of the Lumbar Spine, May 14-18, Cleveland, Ohio, p. 140.
- Cramer, G.D.; Gregerson, D.M.; Knudsen, J.T.; Hubbard, B.B.; Ustas, L.M.; Cantu, J.A. 2002 Gapping of the Z Joints following chiropractic adjusting. Proceedings of the International Conference on Spinal Manipulation, October 4-5, Toronto, Ontario, Canada, p.17.
- Cramer, G.D. 2003 Clinical anatomy of the upper cervical region. Proceedings of the World Federation of Chiropractic's Seventh Biennial Congress. Orlando, Florida, May 1-3, pp. 41-48.
- Cramer, G.D. 2003 Clinical anatomy of the intervertebral disc. Interview by *Journal of the American Chiropractic Association*, 40:13-22.
- Humphreys, B.K.; Kenin, S.; Hubbard, B.; Cramer, G.D. 2003 An investigation of connective tissue bridges linking the posterior spinal dura with muscle and ligament in the upper cervical spine. Presented at European Chiropractors' Union Convention, Athens, Greece, June 1-3. *Eur J Chiropr*, 48(2):67.
- Cramer, G.D. 2004 Small animal model in research related to chiropractic. Interview by *Journal of the American Chiropractic Association*, published February 2004.
- Cramer, G.D.; Wolcott, C.C.; Cantu, J.A.; Fergus, M.P.; Cambron, J.A.; Gregerson, D.M.; Knudsen, J.T. 2004 The effects of side posture adjusting on the lumbar zygapophysial joints of low back pain patients as evaluated by magnetic resonance imaging: a preliminary study. *Journal of Chiropractic Education*, 18:4.
- Cramer, G.C.; Fournier, J.T.; Henderson, C.N.R.; Wolcott, C.C. 2004 Zygapophysial (Z) joint changes following induced segmental hypomobility in the rat. Proceedings of the 2004 Annual Meeting of the Federation of Associations and Societies of Experimental Biology (FASEB), April 17-21, Washington DC; *The FASEB Journal* 18:68.2.
- Medina, A.; Gudavalli, R.; Raju, P.K.; Cramer, G.D. 2005 Determination Of The Distance Between Adjacent Lumbar Vertebrae By An Ultrasonic Based Imaging System: Feasibility Study. *Journal of Chiropractic Education*, 19:65-66.
- Meeker, W.; Pickar, J.; Long, C.; Cramer, G. et al. 2005 Design and implementation of the center for the study of mechanisms and effects of chiropractic manipulation. World Federation of Chiropractic, March 2005, Sydney, Australia,.
- Cramer, G.D.; Budgell, B.; Henderson, C.N.R.; Khalsa, P.; Pickar, J. 2005 Basic science research related to chiropractic spinal adjusting: the state of the art and recommendations revisited. Proceedings of the Tenth Annual Research Agenda Conference, March 17-19, Las Vegas, Nevada, pp.195-197.
- Medina, A.; Gudavalli, R.; Raju, P.K.; Cramer, G.D. 2005 An ultrasonic based system to measure inter spinous process distance in humans: a pilot study. Proceedings of the Annual Conference of the American Association of Mechanical Engineers.
- Bakkum, B.W.; Hong, S.P.; Cramer, G.D.; Henderson, C.N.R. 2005 Preliminary morphologic evidence that vertebral hypomobility induces synaptic plasticity in the spinal cord. *Society for Neuroscience Abstracts*, 175: 11.

- Bakkum, B.W.; Hong, S.P.; Cramer, G.D.; Henderson, C.N.R. 2006 Does Subluxation Actually Affect the Nervous System? Preliminary Morphologic Evidence That It Does. Eleventh Annual Research Agenda Conference, March 16-18, Washington, D.C. Abstract published in: The journal of chiropractic education, 20:1-2.
- Little, J.; Cramer, G.D.; Rich, J.; Lupton, E.; Stiefel, J.; Linaker, K. 2006 Quantifying Osteoarthritic Changes of the Zygapophysial Joints From X-rays: a reliability study. Association of Chiropractic Colleges Eleventh Annual Research Agenda Conference, March 16-18, Washington, D.C. Abstract published in: The journal of chiropractic education, 20:33-34.
- Cramer, G.D.; Little, J.; Daley, C.J.; Henderson, C.N.R. 2006 Development of adhesions in the zygapophysial joints following spinal fixation. Proceedings of the 2006 Conference on Chiropractic Research (CCR), September 15-16, Chicago, Illinois, pp. 36-38.
- Cramer, G.D.; Little, J.; Henderson, C.N.R. ; Daley, C.J. 2007 Zygapophysial (Z) joint adhesions following induced segmental hypomobility in the rat. Proceedings of the Experimental Biology Annual Meeting. Washington, DC, April 28 – May 2. FASEB Journal 21:777.8.
- Cramer, G.D.; Ross, K.; Pocius, J.; Cantu, J.A.; Lupton, E.; Fergus, M.; Gregerson, D.; Selby, S. 2008 Assessing cavitation and z joint gapping following side-posture spinal adjusting: a feasibility case series. Thirteenth Annual Research Agenda Conference, March 13-15, Washington, D.C. Journal of Chiropractic Education 22:54.
- Sullivan, B.M.; Wolcott, C.C.; Ashley, L.; Cambron J.B.; Cramer, G.D. 2008 Implementing an evidence based journal club in a complementary and alternative medicine (CAM) university. Thirteenth Annual Research Agenda Conference, March 13-15, Washington, D.C. Journal of Chiropractic Education 22:78-79.
- Cramer, G.D.; Henderson, C.N.R. ; Pocius, J.; Little, J.W.; Grieve T.J. 2008 Grading system for osteophytic changes in zygapophysial (Z) joints following induced segmental hypomobility in the rat. Experimental Biology Annual Meeting. San Diego, California, April 5-9. The FASEB Journal 22:773.2.
- Cramer, G.D.; Little, J.; Henderson, C.N.R. ; Daley, C.J. 2008 Changes in zygapophysial (Z) joint synovial folds following induced segmental hypomobility in the rat. Experimental Biology Annual Meeting. San Diego, California, April 5-9. The FASEB Journal 22:773.3.
- Cramer, G.D.; Henderson, C.N.R. ; Pocius, J.; Grieve T.J. 2009 Reliability of scoring degeneration of zygapophysial (Z) joint articular surfaces in the rat. Experimental Biology Annual Meeting. New Orleans, Louisiana, April 18-22. The FASEB Journal 23:649.7.
- Cramer, G.D.; Cantu, J.A.; Pocius, J.D.; Balester, F.; Simpson, D.; Horner, T.B.; Healy, J.; McKinnis, R.A. 2009 Reliability of Zygapophysial (Z) Joint Measurements Taken from MRIs of Subjects with Acute Low Back Pain. Experimental Biology Annual Meeting. New Orleans, Louisiana, April 18-22. The FASEB Journal 23:649.8.
- Grieve T.J.; Cramer, G.D.; Cantu, J.A.; McKinnis, R.A.; Bogar, W.; Miley, H.; Heiser, R.; Little, J. 2009 Reliability of Grading Zygapophysial (Z) Joint Degeneration from MRIs of Subjects with Acute Low Back Pain. Experimental Biology Annual Meeting. New Orleans, Louisiana, April 18-22. Abstract 493. The FASEB Journal 23:LB38.
- Cramer, G.D. and other Principal Investigators of R25 grant applications. 2009 Changing the Culture of CAM Institutions Toward an Evidence-based Approach – One R25 at a Time. North American Research Conference on Complementary and Integrative Medicine. May 13-15, Minneapolis, Minnesota.
- Sullivan, B.M.; Cramer, G.D. 2010 Sustainable Evidence Based Practice (EBP) Curriculum in a Complementary and Alternative Medicine (CAM) Institution. Association of Chiropractic Colleges Fifteenth Annual Research Agenda Conference. Las Vegas, Nevada, March 19-21.

- Cramer, G.D.; Ross, K.; Pocius, J.; Cantu, J.A.; Fergus, M.; Gregerson, D.; Selby, S. 2010 Assessing joint vibration during spinal manipulation. Experimental Biology Annual Meeting. Anaheim, California, April 24-28. The FASEB Journal 24:635.2.
- Cramer G; Ross K; Bora P; Raju P; Cambron J; Habeck A; Dexheimer J. 2010 Accelerometry of the zygapophysial joints during spinal manipulative therapy. International Symposium for Clinical and Applied Anatomy. Prague, Czech Republic, July 9-11. Anatomy (International Journal of Experimental and Clinical Anatomy) 4(S1):L82, p.51.
- Cramer G; Ross K; Bora P; Raju P; Habeck A; Selby S; Cambron J. 2010 Distribution of cavitations during spinal manipulation as measured by accelerometry. International Symposium for Clinical and Applied Anatomy. Prague, Czech Republic, July 9-11. Anatomy (International Journal of Experimental and Clinical Anatomy) 4(S1):P82, p.85.
- Cramer G; Ross K; Bora P; Raju P; Selby S; Cambron J; Habeck A; Dexheimer J; McKinnis R. 2011 Localization of cavitations using accelerometry. Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 17-19. Journal of Chiropractic Education 25:77b. (Won a "Best Paper Award" [2000 word abstracts required for the meeting]).
- Cramer G; Ross K; Raju P; Cambron J; Cantu, J; Bora P; Selby S; Habeck A; Dexheimer J; Gregerson D; McKinnis R. 2011 Relationships among cavitation, Z joint gapping, and spinal manipulative therapy. Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 17-19. Journal of Chiropractic Education 25:77c-78.
- Cambron J; Hawk C; Jedlicka J; Iannelli G; Dexheimer J; Cramer G. 2011 Patients' perception of care: comparing placebo and manual therapy within a pilot study. Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 17-19. Journal of Chiropractic Education 25:75a.
- Sullivan B; Pocius J; Wolcott C; Cambron J; Cramer G. 2011 Impact of curricular interventions on evidence based practice (EBP) skills, attitudes, clinical behaviors and patient care outcomes in a complementary and alternative (CAM) journal club. Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 17-19. Journal of Chiropractic Education 25:101a.
- Cramer, G.D.; Ross, K.; Raju, P.K.; Cambron, J.; Cantu, J.; Dexheimer, J.; Bora, P.; Selby, S.; Habeck, A.; Gregerson, D.; McKinnis, R. 2011 Z joint gapping as assessed by piezoelectric accelerometry and MRI. Experimental Biology Annual Meeting. Washington, DC, April 9-13. The FASEB Journal 25(March 17):488.3.
- Cramer, G.D.; Ross, K.; Press, R.; Raju, P.K.; Bora, P.; Cantu, J.; Selby, S.; Cambron, J.; Dexheimer, J. 2011 Morphometric differences of cavitating Z joints. Experimental Biology Annual Meeting. Washington, DC, April 9-13. The FASEB Journal 25(March 17):lb1.
- Grieve T; Sullivan B; Cambron J; Wolcott C; Pocius J; Cramer G. 2011 Evaluating Student Abilities and Behaviors to Access Scientific Literature Following an Evidence-Based Practice Curriculum Intervention at a CAM Institution. 139th APHA Annual Meeting. Washington, DC, October 29 – November 2.
- Sullivan BM; Pocius JD; Cambron J; Grieve T; Wolcott C; Cramer GD. 2012 Outcomes from a Faculty Development Program to Enhance Evidence-Based Practice, Research Utilization and Knowledge Translation. Seventeenth Annual Research Agenda Conference, Las Vegas, Nevada, March 15-17. Journal of Chiropractic Education 26(1):111.
- Sullivan BM; Furner SE; Cramer GD. 2012 Development of a Student Mentored Research Program between a Complementary and Alternative Medicine University and a Traditional, Research Intensive University. Seventeenth Annual Research Agenda Conference, Las Vegas, Nevada, March 15-17. Journal of Chiropractic Education 26(1):111.

- Cambron JA; Iannelli GC; Dexheimer J; Chang M; Schneider M; Jedlicka J; Cramer GD. 2012 Chiropractic dosage for lumbar spinal stenosis. Seventeenth Annual Research Agenda Conference, Las Vegas, Nevada, March 15-17. *Journal of Chiropractic Education* 26(1):86.
- Cramer GD; Cambron JA; Cantu JA; Dexheimer J; Pocius JD; Gregerson D; Fergus M; McKinnis RA. 2012 Zygapophyseal joint space gapping following spinal manipulation in low back pain patients. Experimental Biology Annual Meeting. San Diego, CA, April 21-25. *The FASEB Journal* 26(April):729.3.
- Cramer GD; Bora P; Ross K; Selby S. 2012 Sound and Vibration Recordings during Normal Motion and Spinal Manipulation. Experimental Biology Annual Meeting. San Diego, CA, April 21-25. *The FASEB Journal* 26(April):LB42.
- Sullivan, B.; Furner, S.; Cramer, G.D. 2012 Developing a student mentored research program between complementary and alternative medicine and traditional, research intensive universities to foster evidence-based practitioners and clinician-researchers. International Congress for Educators in Complementary and Alternative Medicine. Georgetown University, Georgetown, Virginia, October 24-26.
- Sullivan, B.; Cambron, J.; Grieve, T.; Cramer, G. 2012 Resources for Learning, Teaching, Applying and Integrating Evidence-based Practice Skills International Congress for Educators in Complementary and Alternative Medicine. Georgetown University, Georgetown, Virginia, October 24-26.
- Sullivan, B.; Cramer, G.D. 2012 Enhancing research in CAM education: a summary of teaching and curriculum, faculty development, collaboration, and culture change. International Congress for Educators in Complementary and Alternative Medicine. Georgetown University, Georgetown, Virginia, October 24-26.
- Cramer, G.D.; Cambron, J.A.; Cantu, J.A.; Dexheimer, J.; Pocius, J.D.; Gregerson, D.; Fergus, M.; McKinnis, R.A.; Grieve, T.J. 2013 Zygapophyseal joint space gapping in low back pain patients following spinal manipulation. Eighteenth Annual Research Agenda Conference, Washington, D.C., March 14-16. *Journal of Chiropractic Education* 27(1):65; DOI 10.7899/JCE-12-036.
- Schneider, M.; Evans, R.; Haas, M.; Hawk, C.; Leach, M.; Cramer, G.; and Long, C. 2014 Distance education online intervention for evidence based practice literacy (DELIVER). Proceedings of the Integrative Research Congress on Integrative Medicine and Health (IRCIHM), Miami, FL, May 13-16 (accepted).

SCIENTIFIC PRESENTATIONS WITHOUT PUBLISHED ABSTRACTS:

- Cramer, G.; and Greenstein J. November 2-3, 1992 Morphometry of the spine by means of MRI and CT. The Academy for the Study of the Spine, Embassy Suites Hotel and the NCC campus.
- Cramer, G.D. 1998 The Holy Spine: A Summary of the History of Scientific Investigation of the Intervertebral Foramina. Annual Meeting of Chiropractic History. Life Chiropractic West, Hayward California, February 21-22.
- Bora, P.; Raju, P.K.; Cramer, G. 2010 New method to better assess a lower back pain treatment using vibration measurements. Eighth Annual Elements of Mechanical Engineering Conference, November 7, Auburn University; Auburn, Alabama. (Poster won 1st Place)
- Bora, P.; Raju, P.K.; Cramer, G. 2011 New method to assess the treatment of lower back pain and spinal joints using accelerometers. Auburn University College of Engineering Research Day, February 17, Auburn University; Auburn, Alabama. (Chosen from 150 graduate students in mechanical engineering to represent mechanical engineering to entire College of Engineering Research Day)

- Bora, P.; Raju, P.K.; Cramer, G. 2011 Novel method to assess the treatment of lower back pain and assess spinal joints using vibration measurements. 24th Annual Graduate Scholars Forum, March 1-3, Auburn University; Auburn, Alabama (Auburn University Graduate Students from all sciences [e.g., physics, mathematics, and several biology related fields] and engineering participate in this event).
- Cramer, G.D.; Cambron, J.A.; Cantu, J.A.; Dexheimer, J.; Pocius, J.D.; Gregerson, D.; Fergus, M.; McKinnis, R.A. 2012 Zygapophyseal joint space gapping following spinal manipulation in low back pain patients. American Association of Anatomists Regional Meeting, Rush University Medical Center, Chicago, Illinois, February 25.
- Real, L. Cramer, G.D.; Dexheimer, J. 2012 Comfort in the Delivery and Receiving of Spinal Manipulation. Research Day, Proviso Mathematics and Science Academy, May 14.

WORKSHOP/SYMPOSIUM/PANEL DISCUSSION PRESENTATIONS:

- Cramer, G.D., 1993 Advanced Imaging - Specific cases with appropriate imaging (two workshops). Sixth Annual Interdisciplinary Symposium, Visiting Scholar's Program, Los Angeles College of Chiropractic, March 1993.
- Cramer, G.D., 1996 Development of a research agenda for the chiropractic profession. Bournemouth, England, October 20.
- Cramer, G.D., 1996 The Clinical Anatomy of Spinal Joint Pain (2 presentations). Symposium on spinal joint pain, Practical Anatomy and Surgical Technique Workshop, St. Louis University School of Medicine, November 8-10.
- Cramer, G.D. and Backman, J., 1998 Instruments of Evaluation. Second International Workshop to Establish a Chiropractic Research Agenda of the Eighth International Conference on Spinal Manipulation, Vancouver, British Columbia, Canada, July 19 (slide presentation and handouts prepared by G. Cramer, presentation made by Dr. Jerrilyn Backman because G Cramer was hospitalized with emergency appendectomy).
- Cramer, G.D., 2002 Presentation of ongoing research in workshop entitled, "Mechanisms-Based Research" at the Association of Chiropractic Colleges/Seventh Research Agenda Conference, New Orleans, Louisiana, March 13-17.
- Cramer, G.D.; Cambron, J.; Sullivan, B.; Furner, S.; Issel, M. 2006 Curriculum development in evidence-based practice. Association of Chiropractic Colleges Eleventh Annual Research Agenda Conference, Washington, D.C., March 16-18.
- Cramer, G.D., 2011 Interprofessional research. In: Practical integrative healthcare models for chiropractic. Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 18.
- Weeks, J., Menard, M., Cramer, G., Anderson, B. Disciplines Research In Complementary and Alternative Medicine. International Research Congress of Integrative Medicine and Health, Portland Oregon, May 15-18, 2012.
- Zwickey, H., Evans, R., Long, C., Milley, R., Cramer, G. Evidence-based CAM: State of the Science of Chiropractic, Naturopathic and Asian & Oriental Medicine. International Research Congress of Integrative Medicine and Health, Portland Oregon, May 15-18, 2012 (presentation, May 15).
- Cramer, G.D.; Maiers, M.; Gultinan, J.; Laird, S. 2012 Workshop coordinator and presenter for: Enhancing education in CAM evidence-based practice through collaborative relationships with research intensive partners. International Congress for Educators in Complementary and Alternative Medicine. Georgetown University, Georgetown, Virginia, October 24-26.
- Cramer G; Zwickey H; Long C; and Evans R. 2012 Overview of the CAM institution R25 programs. International Congress for Educators in Complementary and Integrative

Medicine. Georgetown University, Georgetown, Virginia, October 24-26. [Took over as symposium/panel coordinator for Dr. Zwickey when she became ill several weeks before the conference.]

Tepe, R.; Cramer, G.D.; Linaker, K.; Augat, D.; Long, C.; 2013 Chiropractic colleges' research coursework and curricula: Implications for evidence based education (EBE) and evidence based practice (EBP). Eighteenth Annual Research Agenda Conference, Washington, D.C., March 14-16.

PLENARY SESSION SPEAKER:

Cramer, G.D., 2004 Basic science research in chiropractic, Association of Chiropractic Colleges/Research Agenda Conference, Las Vegas, Nevada, March 12.

Cramer, G.D., 2011 Integration in Research. In: The Future of Integrative Healthcare: Benefits and Obstacles of Integration (closing plenary session). Sixteenth Annual Research Agenda Conference, Las Vegas, Nevada, March 17-19.

LETTERS TO THE EDITOR:

Cramer, G.D.; Darby, S. 1997 Sygapophysial or zygapophyseal? *Journal of Manipulative and Physiological Therapeutics*, 20:294.

Cramer, G.D.; Darby, S. 1997 Related to clinical pathoanatomy of low back pain: a response. *Topics in Clinical Chiropractic*, 4: VIII-XI.

Smith, D.; Cramer, G. 2011 Spinal manipulation is not an emerging risk factor for stroke nor is it major head/neck trauma. Don't just read the abstract! *The Open Neurology Journal*, 5:46-47.

Cramer, G.D.; Ross, K. 2013 Response to Letter to the Editor regarding the paper: Quantification of cavitation and gapping of lumbar zygapophyseal joints during spinal manipulative therapy. *Journal of Manipulative and Physiological Therapeutics*, 36(4):259-260.

Smith, D.; Pohlman, K.; Cramer, G. 2013 Chiropractors respond. Response to: Concerns about referring patients to chiropractors. *Canadian Family Physician*. 59:1257-58.

Cramer, G.; Smith, D. 2014 Correctly Identify Practitioners and Put Adverse Events of Spinal Manipulation into Perspective. Response to: Struwer J, Frangen TM, Ziring E, Hinterseher U, Kiriazidis I. 2013. Massive hemothorax after thoracic spinal manipulation for acute thoracolumbar pain. [Orthopedic reviews 5:e27]. *Orthopedic reviews* 6:5248.

Cramer, G.; Smith, D.; and Cambron, J. 2014 Manipulation is Safe and Effective. Response to article by Susan Berger entitled, "Consider safety of chiropractors' vigorous neck manipulations." *Daily Herald*, St. Charles, Illinois; *Bradenton Herald*, Bradenton, Florida; *Washington Post* [letter to the editor (newspaper), submitted, published in *Daily Herald*s, February 24, 2014].

PUBLISHED INTERVIEWS AND REVIEWS OF RESEARCH:

Cramer, G.D. Interviewed for and quoted in article: Basic Science Research in Chiropractic. *Journal of the American Chiropractic Association*, December 2001 Issue.

Cramer, G. Appeared on SchoolScape for an interview summarizing research at National University of Health Sciences, September 23, 2002. The interview ran over 6 times per week throughout the month of October, 2002.

Cramer, G.D.; Interviewed on December 11, 2002 by Tony Edwards, Executive Editor of *Biomechanics Magazine* for a positive article in that publication on spinal manipulation and low back pain. More specifically he asked for a summary of the findings and the clinical relevance of the Z joint project recently published in *Spine*.

Cramer, G. and Henderson, C. 2004 Degenerative changes of the lumbar zygapophysial joints of rats. Review of small animal model research. In: Chapman-Smith, D. The white rats of Davenport: basic science research affirms the foundations of chiropractic. *Chiropractic Report*, 18:1-3, 6-8.

- Schetchikova, N. interviewer, Research content in the curricula of chiropractic colleges. Quoted Cramer, G. regarding new plans for research content in NUHS curriculum. ACA Journal, January, 2005.
- Schetchikova, N. interviewer, Chiropractic colleges pioneer new academic frontiers. ACA Journal, Fall, 2005.
- Importance of the Foundation of Chiropractic Education and Research to the Chiropractic Profession, February, 2010.
- Menard, M. interviewer, Developing collaborative relationships between traditional and CAM institutions. For distribution by ACCAHC, March, 2010.
- Hill, D. interviewer, R25 Principal Investigators discuss their curricula and programs. Posted on Center for Optimal Integration Website., interview conducted, June 27, 2013.
- Cramer, G. Appeared on Chicago Tonight, WTTW TV Public Broadcasting as part of three person interview on "Safety of neck manipulation." February 3, 2014.

AUDIO TAPE PRESENTATION:

The Clinical Anatomy of Chiropractic Manipulative Therapy. 2001 D.C. Tracts, Data Trace Publishing, Baltimore, Maryland.

STUDY GUIDES:

DOCTOR OF CHIROPRACTIC PROGRAM:

- Cramer, G. 1995 Gross anatomy of the human head and neck, thorax, abdomen, and pelvis: Study guide for AT 3103, sixth edition. 185 pp.
- Cramer, G. 1995 Gross anatomy of the human spine: Study guide for portions of AT 3102 and AT 3103, seventh edition. 42 pp.
- Cramer, G. 1995 Gross anatomy of the human spine: Study guide for first trimester students, third edition. 89 pp.
- Cramer, G. 1996-2007 Gross anatomy of the human spine: Study guide for spinal anatomy module. Editions 4 through 16. 110 pp.
- Sullivan BM, Rizzo L, Cambron JA, Cramer GD. 2009 Essential Evidence Based Practice for CAM Study and Practice Guide. National University of Health Sciences, Lombard, 300pp.

STUDY GUIDES FOR DIPLOMATE PROGRAMS:

- Cramer, G. 1990 Clinical neuroanatomy, Volume I: Development through spinal cord tracts and autonomic nervous system. Study guide for LACC clinical neurology diplomate program 51 pp (updated 1994).
- Cramer, G. 1990 Clinical neuroanatomy, Volume II: Cranial nerves and higher centers of the human brain. Study guide for LACC clinical neurology diplomate program 65 pp (updated 1994).
- Darby, S.; Cramer, G. 1992 Functional neuroanatomy, Volume I: Development, topography, and blood supply of the human brain and spinal cord. Study guide for NCC clinical neurology diplomate program 41 pp.
- Cramer, G.; Darby, S. 1992 Functional neuroanatomy, Volume II: The peripheral nervous system and spinal cord tracts. Study guide for NCC clinical neurology diplomate program 64 pp.
- Darby, S.; Cramer, G. 1992 Functional neuroanatomy, Volume III: Cranial nerves. Study guide for NCC clinical neurology diplomate program 32 pp.

Cramer, G.; Darby, S. 1992 Functional neuroanatomy, Volume IV: The autonomic nervous system and higher centers of the human brain. Study guide for NCC clinical neurology diplomate program 35 pp.

COMPUTER-BASED INSTRUCTIONAL PROGRAM:

Cramer, G. 1989 The lumbosacral plexus.

VIDEO RECORDINGS:

Cramer, G. 1992 Introduction to The National College of Chiropractic Gross Anatomy Laboratory (the tape is shown to groups that tour the anatomy department during the year).

Cramer, G. 1992 Case presentation of cervical spondylotic myelopathy.

Cramer, G. 1992 Case presentation of Guillain Barre syndrome.

Powell, M.; Cramer, G. 1992 Dissection of the superficial face, infratemporal fossa, and the cranial fossae.

Frank, P.W.; Cramer, G. 1992 Dissection of the muscles of the back (six layers) and full spine, bilateral laminectomy.

Frank, P.W.; Cramer, G. 1992 Entrapment neuropathies (demonstration of most entrapment neuropathies described in the scientific literature).

INVITED PRESENTATIONS:

Distinguishing Between Somatic Referred vs. Radicular Pain. Third Annual Interdisciplinary Symposium, Visiting Scholar's Program, Los Angeles College of Chiropractic, November 1989.

Functional Anatomy of Mechanical Treatment. Third Annual Interdisciplinary Symposium, Visiting Scholar's Program, Los Angeles College of Chiropractic, November 1989.

The Future of Anatomic Research Related to the Intervertebral Disc. Third Annual Interdisciplinary Symposium, Visiting Scholar's Program, Los Angeles College of Chiropractic, November 1989.

Clinical Anatomy of Spinal Manipulation. Symposium entitled, "Low Back Pain and the Disc." New York Chiropractic College, May 17, 1991.

Pain Pathways and Pain Generators of the Lumbar Spine. Symposium entitled, "Low Back Pain and the Disc." New York Chiropractic College, May 18, 1991.

Trends in Anatomic Research Related to the Intervertebral Disc. Symposium entitled, "Low Back Pain and the Disc." New York Chiropractic College, May 19, 1991.

The Clinical Anatomy of Spinal Joint Pain. Sixth Annual Interdisciplinary Symposium, Visiting Scholar's Program, Los Angeles College of Chiropractic, March 1993.

Morphometry of the Spine by Means of Computerized Tomography and Magnetic Resonance Imaging. Presentation given to the students of Los Angeles College of Chiropractic as a part of the Sixth Annual Interdisciplinary Symposium, Visiting Scholar's Program, March 1993.

The Holes of the Spine: The Anatomy of the Intervertebral Foramina. Chiropractic Centennial Celebration, Washington, D.C., July 6, 1995.

Clinical Anatomy of Spinal Joint Pain. Chiropractic Centennial Celebration, Davenport, Iowa, September 14, 1995.

- The Clinical Anatomy of Head Pain and Headache. Interdisciplinary Symposium on Headache and Head Pain, Canadian Memorial Chiropractic College, October 26, 1996.
- Accuracy and Reliability of the Identification of Transforaminal Ligaments of the Lumbar Intervertebral Foramina by Means of Magnetic Resonance Imaging. The Annual Meeting of the American College of Chiropractic Radiologists, Denver, Colorado, September 19-21, 1997.
- The Anatomy of Head and Neck Pain in Whiplash Injuries. Annual Meeting of the Alberta College of Chiropractors, Calgary, Alberta, Canada, September 27-28, 1997.
- The Clinical Anatomy of Back Pain. Third Annual Interdisciplinary Symposium, Canadian Memorial Chiropractic College, October 25-26, 1997.
- Cramer, G.; Skogsbergh, D.; Winterstein, J.; Bakkum, B.; Yu, S.W.; Tuck, N.R.; Floyd, J.; and Keyes, M. 1998 Accuracy and reliability of the identification of transforaminal ligaments of the lumbar intervertebral foramina by means of magnetic resonance imaging. Presented by G. Cramer to the NCC Chapter of the Student American Association of Black Chiropractors Meeting, February 28.
- The Clinical Anatomy of Chiropractic Manipulative Therapy. Part of postgraduate course entitled, Back pain: A multi-disciplinary overview of etiology, diagnosis, therapy and prevention. Jointly sponsored by the University of Kentucky College of Medicine Department of Anatomy and Neurobiology and the American Association of Clinical Anatomists, June 13, 1998. pp. LL3.3-L3.11.
- Cramer, G.; Skogsbergh, D.; Winterstein, J.; Bakkum, B.; Yu, S.W.; Tuck, N.R.; Floyd, J.; and Keyes, M. 1998 Accuracy and Reliability of the Identification of Transforaminal Ligaments of the Lumbar Intervertebral Foramina by Means of Magnetic Resonance Imaging. Presented by G. Cramer at the 1998 NCC Homecoming, June 27.
- Cramer, G.D.; Tuck, N.R.; Sapira, I.; Wilding, A.L.; Knudsen, T.; Yu, S.; 1998 Morphometric Evaluation of the Posterior Longitudinal Ligament on Cadaveric Spines by Means of Magnetic Resonance Imaging. Research Day, Los Angeles College of Chiropractic, Oct. 8.
- Cramer, G.D.; Tuck, N.R.; Sapira, I.; Wilding, A.L.; Knudsen, T. 1998 Morphometric Evaluation of the Anterior Longitudinal Ligament on Cadaveric Spines and by means of Magnetic Resonance Imaging. Research Day, Los Angeles College of Chiropractic, Oct. 8.
- Cramer, G.D.; Tuck, N.R.; Sapira, I.; Wilding, A.L.; Knudsen, T.; Yu, S.; 1998 Morphometric Evaluation of the Posterior Longitudinal Ligament on Cadaveric Spines by Means of Magnetic Resonance Imaging. Annual Meeting of the American Association of Chiropractic Radiologists, September 26, Columbus, Ohio.
- Cramer, G.D. 1999 Clinical Anatomy of the Spine. To third and fourth year students, Chiropractic Program, Royal Melbourne Institute of Technology, Japan. Tokyo, Japan, March 30 - April 1, 16 hours of lecture.
- Cramer, G.D.; Tuck, N.R.Jr.; Fonda, S.; Knudsen, T.; Schliesser, J.S.; and Patel, P. 1999 Evaluation of the lumbar zygapophysial joints by means of magnetic resonance imaging before and after spinal adjusting. NCC Homecoming, June 24.
- Cramer, G.D. 2000 The status of the efforts of the Association of Chiropractic Colleges to develop research infrastructure within the chiropractic profession. Research Agenda Conference, July 21-23, 2000.
- Cramer GD 2000 Spinal anatomy: what do we need to know in order to answer questions relative to chiropractic theory and practice? The Second Research Symposium of the Consortium of Canadian Chiropractic Research Centers (CCCRC). Toronto, Ontario, October 19-20 (talk given on October 19).

- Cramer GC, Humphreys BK, Kenin S, Hubbard B The clinical anatomy of connective tissue attachments to the upper cervical spinal dura mater. Modified from: Humphreys, B.K.; Kenin, S.; Hubbard, B.; and Cramer, G.D. An investigation of connective tissue attachments to the posterior spinal dura in the upper cervical spine. NCC Homecoming June 22, 2000.
- The effects of side posture positioning and side posture adjusting on the lumbar zygapophysial joints as evaluated by magnetic resonance imaging. Student American Association of Black Chiropractors. September 26, 2000.
- Cramer, G.D.; Fournier, J.T.; and Henderson, C. 2000 Zygapophysial joint changes following spinal fixation. Homecoming, National University of Health Sciences, June 21, 2001.
- Tissue Injury in Whiplash: Anatomy and Mechanisms of Neck Pain and Referred Head Pain, Canadian Memorial Chiropractic College 7th Annual Conference on Advancements in Chiropractic, Toronto Ontario, October 20, 2001.
- Anatomic Research in Complementary and Alternative Medicine. Symposium on Research in Complimentary and Alternative Medicine to Faculty and Administration of Florida State University, Tallahassee, Florida, January 15-16, 2002.
- Clinical Anatomy of Chiropractic Adjusting. 2002 Research and Special Topics Club. Palmer College of Chiropractic, Davenport, Iowa, January 29, 2002.
- Clinical Anatomy of Chiropractic Adjusting. Association of Veterinarians in Complimentary and Alternative Medicine. Downers Grove, Illinois, May 3, 2002.
- Cramer, G.D.; Gregerson, D.M.; Knudsen, J.T.; Hubbard, B.B.; Ustas, L.M.; and Cantu, J.A. Gapping of the Z Joints following chiropractic adjusting. Homecoming, National University of Health Sciences, June 20, 2002.
- Cramer, G.D.; Gregerson, D.M.; Knudsen, J.T.; Hubbard B.B.; Ustas, L.M.; Cantu, J.A., 2003 The effects of side posture positioning and spinal adjusting on the lumbar z joints: a randomized controlled trial of 64 subjects. Miami Valley Chiropractic Association, Dayton, Ohio, May 19, 2003.
- Cramer, G.C.; Fournier, J.T.; Henderson, C.N.R.; Wolcott, C.C. 2003 Degenerative Changes Following Spinal Fixation in a Small Animal Model. Miami Valley Chiropractic Association, Dayton, Ohio, May 19, 2003.
- Cramer, G.C.; Fournier, J.T.; Henderson, C.N.R.; Wolcott, C.C. 2003 Degenerative Changes Following Spinal Fixation in a Small Animal Model. NUHS Homecoming, Lombard, Illinois, June 19, 2003.
- Cramer, G.D.; Research at NUHS related to the anatomic affects of chiropractic adjusting. Research Club, Palmer College of Chiropractic, Davenport, Iowa, June 3, 2003.
- Cramer, G.C.; State of National University of Health Sciences. NUHS Alumni at Florida Chiropractic Association Annual Convention, Orlando, Florida, August 16, 2003.
- Basic science research related to chiropractic adjusting. Veterinary Chiropractic Association, Sturtevant, Wisconsin, November 8, 2003, March 27, 2004.
- Clinical anatomy of low back pain, including the sacro-iliac joint. Chiropractic Association of South Africa Annual Conference, Durbin, South Africa, September 26, 2003.
- Clinical anatomy of chiropractic adjusting and research related to chiropractic adjusting. Chiropractic Association of South Africa Annual Conference, Durbin, South Africa, September 27, 2003.
- Cramer, G.D.; Wolcott, C.C.; Cantu, J.A.; Fergus, M.P.; Cambron, J.A.; Gregerson, D.M.; Knudsen, J.T. The effects of side posture adjusting on the lumbar zygapophysial joints of low back pain patients as evaluated by magnetic resonance imaging: a preliminary study. NUHS Homecoming, Lombard, Illinois, June 24, 2004.

- Cramer, G. Degenerative changes of the lumbar zygapophysial joints of rats. Review of research by Chiropractic Report. In: Chapman-Smith, D. The white rats of Davenport: basic science research affirms the foundations of chiropractic. Chiropractic Report, 18:1-3, 6-8.
- Cramer, G. Update on NUHS. Illinois Chiropractic Society. Springfield, Illinois, September, 16, 2004.
- Cramer, G.D.; Wolcott, C.C.; Cantu, J.A.; Fergus, M.P.; Cambron, J.A.; Gregerson, D.M.; Knudsen, J.T. The effects of side posture adjusting on the lumbar zygapophysial joints of low back pain patients as evaluated by magnetic resonance imaging: a preliminary study. Batavia High School, December 8, 2004.
- Cramer, G.D.; Cambron, J.; Swenson, R.; Bakkum, B.; Furner, S.; Issel, M. Curriculum development in evidence-based practice. NUHS Homecoming, Lombard, Illinois, June 23, 2005.
- Cramer, G.D.; Clinical anatomy of Manipulative Therapy and Clinical Anatomy of Head Pain. Western States Chiropractic College, 7th Annual Northwest Chiropractic Symposium, June 4, 2006.
- Cramer GD, Little J, Daley CJ, Henderson CNR. Development of Adhesions in the Zygapophysial Joints Following Spinal Fixation. NUHS Homecoming, Lombard, Illinois, June 22, 2006.
- Cramer GD, Cambron JA, Cantu J, Gregerson D. Z joint changes in low back pain following adjusting: methods used. NUHS Homecoming, Lombard, Illinois, June 22, 2006.
- Cramer GD 1) Clinical Anatomy of Low Back and Leg Pain and 2) Anatomy of the Cervical Region with Respect to Neck and Head Pain (5 hours), Veterinary Spinal Manipulative Therapy Annual Convention, Palm Springs, CA; October 6-8, 2006.
- Cramer GD, Cambron JA, Dexheimer J, Pocius J, Cantu J, Gregerson D. Z joint changes in low back pain following adjusting. NUHS Homecoming, Lombard, Illinois, June 24, 2007.
- Cramer GC, Vertebral Fixation, Degeneration, and Gapping. Texas Chiropractic College Visiting Scholars Program. Convocation Presentation to faculty, students, and staff; October 3, 2007.
- Cramer GC, The Clinical Anatomy of Spinal Manipulative Therapy. Texas Chiropractic College Visiting Scholars Program. Presentation to fifth trimester students; October 3, 2007.
- Cramer GC, The Clinical Anatomy of the Pediatric Spine. Texas Chiropractic College Visiting Scholars Program. Presentation to first trimester students; October 3, 2007.
- Cramer GC, The Clinical Anatomy of Cervicogenic Headaches. Texas Chiropractic College Visiting Scholars Program. Presentation to ninth and tenth trimester students; October 3, 2007.
- Cramer GC, Developing a career in CAM research. Texas Chiropractic College Visiting Scholars Program. Presentation to eighth trimester students; October 3, 2007.
- Cramer GC, Curriculum Development in Evidence-Based Practice. Texas Chiropractic College Visiting Scholars Program. Presentation to Curriculum Committee, October 4, 2007.
- Cramer GC, If you don't use it you lose it: how spine fixation leads to degeneration and how spinal manipulation can initiate vertebral motion. Exercise Science Colloquium. Miami University of Ohio, Department of Kinesiology and Health; October 17, 2007, Oxford Ohio.
- Ornelas J., Furner S., Zwanziger J, Sullivan BM, Losasso T, Helmchen L, **Cramer GD**. Implementation of a student mentored research program in conjunction with the University of Illinois at Chicago. NUHS Homecoming; Lombard, Illinois, June 22, 2008.
- Cramer GD, Ross K, Pocius J, Cantu JA, Laptook E, Fergus M, Gregerson D, Selby S. Assessing cavitation and Z joint gapping following side-posture spinal adjusting: a feasibility case series. NUHS Homecoming; June 22, 2008.
- Cramer, G.D. (Cambron, J.; Grieve, T.; Sullivan, B.; Furner, S.; Issel, M., Investigators) Curriculum Development in Evidence-Based Practice and Sustainable EBP Program in a

- CAM Institution: An Update. Presentation to the Directors of R25 Programs at Medical and CAM Institutions and to the NCCAM Program Officers. Bethesda, Maryland, June 21-22, 2007, July 24-25, 2008; June, 2009; August, 2010; June, 2011; June 11-12, 2012.
- Cramer, G. The Clinical Anatomy of Spinal Manipulation. Veteran's Administration (VHA) Chiropractic Service 6th Annual Meeting. Talk given to the chiropractic physicians (31) and two physiatrists who practice in the VA. The program was approved for ACCME and ACCME-NP credits, which was a first for chiropractic physicians in the VA. Las Vegas, NV, March 16, 2011.
- Cramer, G. Clinical Anatomy of Spinal Manipulative Therapy. International Academy of Chiropractic Neurology. Chicago Marriott Hotel, Chicago, Illinois, September 24, 2011.
- Cramer, G.D.; Cambron, J.A.; Cantu, J.A.; Dexheimer, J.; Pocius, J.D.; Gregerson, D.; Fergus, M.; McKinnis, R.A.; Grieve, T.J. 2013 MRI Zygapophysial Joint Space Changes (Gapping) in Low Back Pain Patients following Spinal Manipulation and Side Posture Positioning: A Randomized Controlled Mechanisms Trial with Blinding. One-hour Webinar, Lecture, and Session (OWLS) series, National University of Health Sciences (NUHS), May 10, 2013.
- Cramer, G.D. Pre-program seminar: Clinical Anatomy Of Spinal Manipulative Therapy; Clinical Anatomy Of Spinal Joint Pain; and Clinical Anatomy Of Cervicogenic Headache. IV International Seminar of Chiropractic (U of Feevale, Program of Chiropractic, Homecoming) – The Lumbar Spine In Focus. University of Feevale, Novo Hamburgo, Brazil, November 20-21 (same 8-hour seminar given each day), 2013.
- Cramer, G.D. Opening Ceremony, Opening Lecture: Risk vs. Benefit of Spinal Manipulation. IV International Seminar of Chiropractic (U of Feevale, Program of Chiropractic, Homecoming) – The Lumbar Spine In Focus. University of Feevale, Novo Hamburgo, Brazil, November 21, 2013.
- Cramer, G.D. Workshops (same 90 minute workshop given twice): Clinical Anatomy Of Spinal Manipulative Therapy. IV International Seminar of Chiropractic (U of Feevale, Program of Chiropractic, Homecoming) – The Lumbar Spine In Focus. University of Feevale, Novo Hamburgo, Brazil, November 22, 2013.
- Cramer, G.D. Mechanisms of Action Research Related to Spinal Manipulation. IV International Seminar of Chiropractic (U of Feevale, Program of Chiropractic, Homecoming) – The Lumbar Spine In Focus. University of Feevale, Novo Hamburgo, Brazil, November 23, 2013.

POSTGRADUATE TEACHING:

- Postgraduate Faculty, Diplomate in Chiropractic Neurology Program - Functional neuroanatomy I and II, Los Angeles College of Chiropractic 1990-1998.
- Postgraduate Faculty, Diplomate in Chiropractic Neurology Program - Clinical neuroanatomy, National College of Chiropractic, April 1992-1998.
- Postgraduate Faculty, Diplomate in Chiropractic Orthopedics Program - Clinical Anatomy of the Cervical Spine, National University of Health Sciences 1990-1998, 2008-present.
- Update on clinical anatomy (including basic science research) of chiropractic adjusting. Veterinarians and Chiropractors in Complimentary and Alternative Medicine (VCCAM). Sturtevant, Wisconsin, Two-four times per year March 2003 – present. Have also presented at the VCCAM annual conferences.