CURRICULUM VITAE

ALFONSO E. BELLO, MD, MHS, FACP, FACR, DABPM

Primary Clinic Address: **Illinois Bone and Joint Institute, LLC**
2401 Ravine Way, Glenview, IL 60025
Phone: 847.998.5680 Fax: 847.998.6365
Research Address: 9000 Waukegan, Morton Grove, IL 60053
Phone : 847.375-3000
E-mail: abello@ibji.com

EDUCATION

8/94-6/96	M.H.S. (Masters in Health Sciences), Biometry Duke University School of Medicine, Durham, NC
9/86-6/90	M.D., University of Illinois College of Medicine, Chicago, IL
8/82-5/86	B.A., Chemistry, DePauw University, Greencastle, IN

POSTGRADUATE MEDICAL TRAINING

7/93-6/96	Fellowship (Rheumatology/Clinical Research Training Program) Duke University Medical Center, Durham, NC
7/91-6/93	Residency (Internal Medicine) Lutheran General Hospital, Park Ridge, IL
7/90-6/91	Internship (Medicine) Lutheran General Hospital, Park Ridge, IL

MEDICAL LICENSURE

1996-present	Illinois Medical License - Active
1996-present	Illinois Controlled Substance License - Active
1993-present	North Carolina Medical License - Inactive
1993-present	DEA Registration - Active

BOARD CERTIFICATIONS

2006	Diplomate in Pain Medicine, American Board of Pain Medicine
2007	Diplomate in Rheumatology, American Board of Internal Medicine (#148488) RECERTIFIED 2007
1994	Diplomate in Internal Medicine, American Board of Internal Medicine (#148488)
1991	Diplomate, National Board of Medical Examiners

ACADEMIC AFFILIATIONS

2007 –2009	Adjunct Associate Professor of Family Medicine Northwestern University School of Medicine
2002-present	Clinical Associate Professor of Medicine University of Illinois College of Medicine, Chicago, IL
1998-present	Consulting Associate Duke University Medical Center, Division of Rheumatology, Allergy, and Clinical Immunology, Durham, NC
1998-2002	Clinical Assistant Professor of Medicine Finch University of Health Sciences/Chicago Medical School, Department of Medicine, North Chicago, IL

HOSPITAL STAFF PRIVILEGES

Evanston Northwestern Healthcare Hospitals, Evanston, IL
Advocate Lutheran General Hospital, Park Ridge, IL

PROFESSIONAL EXPERIENCE

9/07-present Director, Clinical Research, Illinois Bone & Joint Institute, LLC

6/02-present Clinical Associate Professor of Medicine, Section of Rheumatology, University of Illinois College of Medicine, Chicago, IL.

1/01-present Rheumatologist/ Pain Medicine, Illinois Bone & Joint Institute, Ltd., Chicago, IL

4/01-12/05 Chief, Section of Rheumatology, Department of Internal Medicine, Illinois Masonic Medical Center, Chicago, IL.
Function as head of the rheumatology service in a 502-bed teaching hospital. Developed curriculum and supervise resident physicians. Participate in departmental and executive council meetings.

3/01-present President & Chief Medical Officer, Integrated Medical Affairs, Inc., Glenview, IL.
Manage a corporation that provides services in medical marketing strategy, phase IIIb-IV clinical trial development and management, and product advocacy for the pharmaceutical industry.

8/98-3/01 Medical Director, Global Medical Affairs, Pharmacia Corporation, Skokie, IL
Designed and managed the North American phase IIIb/IV clinical trial development program for Celebrex®. Operating budget $20 million. Provided strategic medical input to U.S. commercial plans for Celebrex. Acted as primary medical resource to associated functions in the U.S. marketing and sales organization. Worked with Pfizer medical counterparts in providing medical support to the commercial team. Acted

as medical resource to associated functions in the Global Arthritis and Pain Franchise. Provide strategic input and delivered integrated physician-oriented messages for national advocates. Member, Regulatory Approval Committee. Provided medical review of all U.S. and global Celebrex promotional materials in accordance with FDA guidelines. Member, COX-2 Inhibitor Clinical Safety Committee. Reviewed safety data of all COX-2 agents in clinical trials and post-marketing surveillance.

9/98-6/00 Consultant, PhyCor, Inc. Nashville, TN
Participated in the Arthritis Care Management Council charged with developing arthritis treatment pathways.

7/96-12/00 Attending Rheumatologist, Advocate Medical Group, Park Ridge, IL
Practice clinical rheumatology consulting service. Teach medical students from Chicago Medical School and medical residents from 2 Advocate Healthcare hospitals.

9/97-7/98 Medical Director, Advocate Comprehensive Outpatient Rehabilitation Facilities, Chicago and Buffalo Grove, IL
Managed physical therapy clinic at 2 facilities and 20 therapists. Performed quality assurance reviews of patient plans.

7/94-6/96 Admitting Triage Physician, Department of Veterans Affairs Medical Center, Fayetteville, NC
Practiced clinical medicine activities in the Emergency Department. Facilitated relationship between contract physicians and regular VA Medical Staff. Managerial responsibility for recruiting physicians and scheduling.

UNIFORMED SERVICE EXPERIENCE

2007-2010 U.S. Public Health Service Inactive Reserve Corps, Rank: Commander.

PROFESSIONAL ASSOCIATIONS

1995-present	Duke Affiliated Rheumatology Trials Consortium
1994-present	Fellow (inducted 1997), American College of Rheumatology
1994-present	Arthritis Foundation
1990-present	Fellow (inducted 2002), American College of Physicians
2000-2001	American College of Physician Executives (Advanced Standing)
2003-present	National Osteoporosis Foundation
2004-present	American Society of Interventional Pain Physicians
2005-present	American Academy of Pain Medicine
2007-present	Commissioned Officer Association
2007-present	Reserve Officer Association
2007-present	Association of Military Surgeons of the United States
2009-present	American Medical Association
2010-present	American Legion

AWARDS & HONORS

1996	American College of Rheumatology Senior Rheumatology Scholar Award
1990	American College of Rheumatology Traveling Student Award
1990, 1992	University of Chicago Distinguished Resident Teaching Award
2010	USPHS Unit Commendation
2010	US Coast Guard Commandant Letter of Commendation
2010	US Coast Guard Meritorious Team Commendation (3)
2009	US Coast Guard Unit Commendation
2009	US Coast Guard Meritorious Team Commendation
2009	USPHS Commissioned Corp Training Ribbon

COMMITTEE PARTICIPATION

2012-present	American College of Rheumatology Relative Value Update Committee for the American Medical Association
2008-2010	Pain Management Task Force, American College of Rheumatology
2006-present	Rheumatoid Arthritis Research Campaign Leadership Committee, Research & Education Foundation, American College of Rheumatology
2002-2005	Pharmacology & Therapeutics Committee, Advocate Illinois Masonic Medical Center, Chicago, IL
2002-2003	CME Advisory Board, Strategic Institute for Continuing Health Care Education, Vienna, VA
2001-2003	Finance Committee, American College of Rheumatology

JOURNAL PARTICIPATION

2003-2004	Reviewer, *Arthritis & Rheumatism*

PHARMACEUTICAL RELATIONSHIPS

2002-present	National Scientific Advisory Board, Abbott Immunology
2002-2003	National Advisory Board, Centocor
2001-2010	Speaker and Consultant, Pfizer Inc.
2001-2002	Speaker and Consultant, Pharmacia Corporation
2005-2006	National Scientific Advisory Board, Savient Pharmaceuticals, Inc.
2005- 2007	National Scientific Advisory Board, Gelita Group
2005-2009	National Advisory Board, Genentech Inc.
2006-2009	National Speaker, Bristol Meyers Squibb
2006-2009	National Speaker, Glaxo Smith Kline.
2007-2009	National Speaker, Alpharma
2009-present	Consultant, Horizon Pharma.
2010-present	National Speaker, Amgen

EXECUTIVE EDUCATION AND OTHER COURSES

2009-present U.S. Naval War College, Fleet Seminar Program.
9/99 Marketing for the Nonmarketing Manager. The University of Chicago Graduate School of Business, Chicago, IL
9/00 Media Training, Pharmacia Corporation (Company Spokesman)

COMMUNITY ACTIVITIES

Medical Staff Member, Duke University Men's Soccer Team
Soccer Coach, Wilmette Park District, Wilmette, IL
Basketball Coach, Wilmette Park District, Wilmette, IL
Soccer Coach, Glenview Soccer Club, Glenview, IL (USSF E Certificate 2010)
Soccer Coach, Mirage Soccer Club, Glenview, IL
United States Coast Guard Auxiliary
- Coast Guard Support-Health & Safety
  - Atlantic West Manager, Auxiliary Healthcare (Medical Officer)
- Assistant District Staff Officer-Member Training, District 9W
- Flotilla Staff Officer-Communications, Flotilla 3-5
- Instructor Qualified
  - American Heart Association First Aid Instructor
  - American Heart Association Basic Life Support (CPR) Instructor
- Interpreter Corps-Spanish
- COMPASS Program

Boy Scouts of America
- U.S. Coast Guard National Scout Jamboree Task Force 2010
- Council Physician, Northeast Illinois Council
- Member, Risk Management Committee, Northeast Illinois Council
- Member, Heritage Society, Northeast Illinois Council
- Den Leader, Cub Scout Pack 10, Wilmette, IL
- Pack Trainer, Cub Scout Pack 10, Wilmette, IL
- Assistant Scoutmaster, Troop 2, Wilmette, IL
- Boy Scouts of America National Jamboree Medical Staff 2005
- Vice-Chairman, Scoutreach Program, Northeast Illinois Council

Medical Staff, 2010 Chicago Marathon.

ORIGINAL ARTICLES

1. Bello AE, Garrett WE, Wang H, Lohnes J, DeLong E, Caterson B, Kraus VB. Comparison of synovial fluid cartilage concentrations and chondral damage assessed arthroscopically in acute knee injury. *Osteoarthritis Cartilage* 1997;5:419-426.

2. Patterson R, Bello AE, Lefkowith J. Immunologic tolerability profile of celecoxib. *Clin Therapeutics* 1999*;* 21(12):2065-2077.

3. Welton A, Fort JG, Puma JA, Normandin D, Bello AE, Verburg KM. Cyclooxygenase-2-specific inhibitors and cardiorenal function: a randomized,

controlled trial of celecoxib and rofecoxib in older hypertensive osteoarthritis patients. *Am J Therapeutics* 2001;8:85-96.

4. McKenna F, Weaver A, Fiechtner JJ, Bello AE, Fort JG. COX-2 specific inhibitors in the management of osteoarthritis: a placebo-controlled, randomized, double-blind study. *J Clin Rheum* 2001:7;151-9.

5. Whelton A, White WB, Bello AE, Puma JA, Fort JG. Effects of celecoxib and rofecoxib on blood pressure and edema in patients >/=65 years of age with systemic hypertension and osteoarthritis. Am J Cardiol 2002 Nov 1;90(9):959-63.

6. Whelton A, Fort JG, Puma JA, Normandin D, Bello AE, Verburg KM. Cyclooxygenase-2-specific inhibitors and cardiorenal function: a randomized, controlled trial of celecoxib and rofecoxib in older hypertensive osteoarthritis patients. Am J Manag Care 2002 Oct;8(15 Suppl):S371-82.

7. Goldstein JL, Bello AE, Spalding W, Suh S, Fort JG. Cyclooxygenase-2 specific inhibitors and upper gastrointestinal tolerability in patients with osteoarthritis receiving concomitant low dose aspirin: pooled analysis of 2 trials. J Rheumatol. 2005 Jan;32(1):111-7

8. Singh G, Fort J, Goldstein J, Levy R, Hanrahan P, Bello A, et. al. Efficacy and upper gastrointestinal safety of celecoxib compared to naproxen and diclofenac in patients with osteoarthritis: randomized, double blind, controlled, multicenter, multinational trial (the SUCCESS-I study). Am J Med. 2006 Mar;119(3):255-66

9. Bello AE, Oesser S. Collagen hydrolysate for the treatment of osteoarthritis and other joint disorders: a review of the literature. Curr Med Res Opin 2006; 22(11): 2221–2232.

10. Report of the American College of Rheumatology Pain Management Task Force. Arthritis Care & Research Vol. 62, No. 5, May 2010, pp 590–599.

11. Laine L, Kivitz AJ, Bello AE, et al.Double-Blind Randomized Trials of Single-Tablet Ibuprofen/High-Dose Famotidine vs. Ibuprofen Alone for Reduction of Gastric and Duodenal Ulcers. Am J Gastroenterol 2011 Dec 20

NATIONAL PRESENTATIONS AND EXHIBITS

1. Antiphospholipid Syndrome. United States Colombian Medical Association National Meeting, Chicago, IL, 8/31/98.
2. Cyclooxygenase-2 Inhibition in Arthritis Care. US Armed Forces Rheumatology Meeting, Tyson's Corner, VA, 11/20/98.
3. White WB, Welton A, Bello AE, Fort JG. The effects of the COX-2 specific inhibitors on systolic blood pressure and rates of edema in older treated Hypertensive patients. Scientific Abstract, 50th Annual Scientific Session of the American College of Cardiology, Orlando, FL, 3/18/01.

4. Welton A, White W, Bello A. Hypertensive Effects of Cox-2 Inhibitors on Elderly Hypertensive Patients with Osteoarthritis. Podium Presentation. American Geriatrics Society Annual Meeting, Chicago, IL, 5/11/01.
5. Singh G, Goldstein J, Bensen W, Agrawal N, Eisen G, Fort J, Bello A, Boots S. SUCCESS-1 In Osteoarthritis (OA) Trial: celecoxib significantly reduces risk of serious upper GI complications compared to NSAIDS while providing similar efficacy in 13,274 randomized patients. Scientific Abstract, European League Against Rheumatism Annual Meeting, Prague, Czech Republic, 6/14/01.
6. Goldstein J, Agrawal N, Eisen G, Stenson W, Bello A, Fort J, Boots S. Significantly improved upper gastrointestinal (UGI) tolerability with celecoxib, a COX-2 specific inhibitor, compared with conventional NSAIDs. The SUCCESS I trial. Scientific Abstract, European League Against Rheumatism Annual Meeting, Prague, Czech Republic, 6/14/01.
7. Goldstein J, Singh G, Fort J, Bello A. SUCCESS-1 in Osteoarthritis (OA) trial: celecoxib demonstrates significantly lower hepatic toxicity than diclofenac in the treatment of osteoarthritis. Scientific Abstract, European League Against Rheumatism Annual Meeting, Prague, Czech Republic, 6/16/01.
8. Singh G, Goldstein J, Fort J, Bello A, Boots S. SUCCESS-1 in Osteoarthritis: celecoxib demonstrates similar efficacy to the conventional NSAIDS, diclofenac and naproxen, in patients with osteoarthritis treated in 39 countries in 6 continents. Scientific Abstract, European League Against Rheumatism Annual Meeting, Prague, Czech Republic, 6/16/01.
9. Whelton A, Singh G, White W, Fort J, Bello A. Celecoxib does not increase the risk of cardiac failure, edema, or hypertension compared to NSAIDS: results from success 1, a double blind, randomized trial in 13,274 OA patients. Scientific Abstract, European League Against Rheumatism Annual Meeting, Prague, Czech Republic, 6/16/01.
10. Singh G, Goldstein J, Agrawal N, Eisen G, Stenson W, Fort J, Bello A, Boots S. COX-2 specific inhibitors - is there any benefit of using these agents in patients on low dose aspirin (ASA)? Scientific Abstract, European League Against Rheumatism Annual Meeting, Prague, Czech Republic, 6/16/01.
11. Current Concepts in the Treatment of Rheumatoid Arthritis. Southern Medical Association Annual Meeting, Nashville, TN, 11/10/01.
12. Singh G, Fort J, Triadafilotoulos G, Bello A, Boots S. Benefits of using celecoxib in patients on low dose aspirin: data from SUCCESS 1, a 12-week, multinational trial with 13,274 patients with osteoarthritis of the knee, hip, or hand. *Arthritis Rheum* 2001:44;S224.
13. Singh G, Fort J, Triadafilotoulos G, Bello A. SUCCESS-1: A global osteoarthritis trial in 13274 randomized patients. Celecoxib provides similar efficacy to diclofenac and naproxen while providing improved GI safety. *Arthritis Rheum* 2001:44;S135.
14. Whelton A, White W, Bello A, Puma J. Blood pressure control and edema rates in older patients with hypertension and osteoarthritis following treatment with COX-2 specific inhibitors. European League Against Rheumatism Annual Meeting, Stockholm Sweden 6/13/02.

15. Goldstein J, Bello A, Fort J. Differential rates of UGI symptoms in patients receiving Celecoxib vs. rofecoxib with and without aspirin for cardiovascular prophylaxis. European League Against Rheumatism Annual Meeting, Stockholm Sweden 6/13/02
16. White W, Whelton A, Bello A, Puma J. Rofecoxib, but not celecoxib, increases systolic blood pressure in hypertensive patients treated with ACE-inhibitors and beta-blockers. European League Against Rheumatism Annual Meeting, Stockholm Sweden 6/13/02
17. Singh G, Goldstein J, Bello A, Lefkowith A, Fort J. Effect of concurrent low-dose aspirin (ASA) use on the incidence of UGI symptoms in patients receiving celecoxib or conventional NSAIDs: analysis of two large randomized, double-blind, controlled clinical studies. European League Against Rheumatism Annual Meeting, Stockholm Sweden 6/13/02
18. Weinblatt ME, Genovese MC, Kivitz AJ, Bello AE, et. al. Efficacy, safety, and tolerability of HZT-501, including users of low-dose aspirin, a single tablet combination of ibuprofen-famotidine: results of two phase 3 trials. *Arthritis Rheum* 2010:62; S391.
19. Schiff MH, Genovese MC, Kivitz AJ, Bello AE, et.al. Long term safety of an NSAID with built-in gastroprotection for treatment of pain and inflammation related to OA and RA: results from a one year safety trial of a single-tablet combination of ibuprofen-famotidine vs. ibuprofen alone. . *Arthritis Rheum* 2010:62; S392.

CONTINUING MEDICAL EDUCATION COURSES GIVEN

1. Advances in Arthritis Treatment: Focus on Celecoxib. University of North Carolina, Department of Orthopedic Surgery Conference, Chapel Hill, NC, 3/4/99.
2. Advances in Arthritis Treatment: Focus on Celecoxib. Duke University Medical Center, Division of Rheumatology, Allergy, & Clinical Immunology Grand Rounds, Durham, NC, 3/4/99.
3. Advances in Arthritis Treatment. Duke University Medical Center, Division of Sports Medicine Symposium, Winston-Salem, NC, 5/8/99.
4. Update on the Medical Management of Osteoarthritis. Lutheran General Hospital, Department of Medicine Grand Rounds, Park Ridge, IL, 7/26/00.
5. Future Therapies for Arthritis Alternative and Complementary Therapies in Arthritis. Arthritis Foundation, Greater Chicago Chapter, 5/5/01.
6. Update in the Treatments of Scleroderma. Scleroderma Foundation of Greater Chicago, 5/20/01.
7. Update on the Management of Rheumatoid Arthritis. St. Mary's of Nazereth Hospital, Department of Medicine Grand Rounds, Chicago, IL, 6/5/01.
8. Update on the Management of Osteoarthritis. St. Francis Hospital, Department of Medicine Grand Rounds, Evanston, IL, 6/22/01.
9. Current Concepts in Osteoarthritis & Rheumatoid Arthritis. St. Elizabeth Hospital Medicine Grand Rounds, Chicago, IL 8/28/01.
10. Current Concepts in the Treatment of Rheumatoid Arthritis. Southern Medical Association Annual Meeting, Nashville, TN, 11/10/01.

11. Systemic Lupus Erythematosus. Lutheran General Hospital Pediatrics Grand Rounds, Park Ridge, IL 11/20/01.
12. Arthralgias & Myaligias. Illinois Masonic Medical Center Family Practice Grand Rounds, Chicago, IL 12/28/01.
13. Update on the Treatment of Rheumatoid Arthritis. Highland Park Hospital Grand Rounds, Highland Park, IL 1/15/02.
14. New Advances in the Treatment of Rheumatoid Arthritis. Advocate Illinois Masonic Medical Center Medicine Grand Rounds, Chicago, IL 2/8/02.
15. Update on the COX-2 Inhibitors. Celecoxib Latin American Physician Consultants Meeting, Rio de Janeiro, Brazil 2/11/02.
16. The Update in the Treatment of Arthritis. West Suburban Hospital Medical Center Grand Rounds, Oak Park, IL 3/20/02.
17. Update on the Treatment of Osteoarthritis. Chicago Medical School Department of Medicine Grand Rounds, North Chicago, IL 5/15/02.
18. Analgesia and Role of COX-2. Highland Park Hospital Medical Grand Rounds, Highland Park, IL 6/25/02.
19. Update on SLE. Illinois Masonic Medical Center, Chicago, IL 9/4/2002.
20. Advances in the Treatment of Rheumatoid Arthritis. Wellness and Health 2003 and Beyond. University of Illinois Medical Center Symposium, Chicago, IL 1/25/2003
21. The Treatment of Rheumatoid Arthritis, Lutheran General Children's Hospital Grand Rounds, Park Ridge, IL 1/28/2003
22. Update on COX-2 Inhibitors: the Myths and Realities. Highland Park Hospital, Highland Park, IL 2/18/2003
23. COX-2 Inhibitors: Emerging Data on Safety. Midwest Medical Conference, Chicago Medical Society, Chicago, IL 3/22/2003.
24. COX-2 Inhibitors: Update on Safety, Decatur Memorial Hospital Medical Grand Rounds, Decatur, IL, 3/26/2003.
25. The Evaluation & Treatment of Back Pain, Advocate Illinois Masonic Medical Center Medicine Grand Rounds, Chicago, IL, 4/30/2003.
26. Update on the COX-2 Inhibitors, Carle Clinic Orthopedic Grand Rounds, Champaign, IL, 5/12/2003.
27. Treatment of Rheumatoid Arthritis 2003, University of Illinois Medicine Grand Rounds, Chicago, IL, 5/13/2003.
28. Update on the Medical Management of Arthritis., Norwegian American Hospital Medicine Grand Rounds, Chicago, IL, 5/15/2003.
29. The Medical Management of Rheumatoid Arthritis, Arthritis Foundation of Greater Wisconsin, Green Bay, WI, 5/20/2003.
30. The Treatment of Rheumatoid Arthritis, Columbus Regional Hospital Grand Rounds, Columbus, IN 6/11/2003.
31. Acute Arthritis. Advocate Illinois Masonic Medical Center Department of Medicine Grand Rounds, Chicago, IL 8/23/2003.
32. The Next Step in RA Therapy: A Case-Based Interactive Program, Raleigh, NC 10/9/2003.
33. Update in Biologic Therapies for Rheumatic Diseases. University of Illinois Medical Center Department of Medicine Grand Rounds, Chicago, IL 7/27/2004.

34. Update in NSAID Therapies. Norwegian American Hospital Grand Rounds, Chicago, IL 9/9/2004.
35. COX-2 Inhibitors and Cardiovascular Safety. Naval Training Center, Great Lakes, IL Medical Grand Rounds, North Chicago, IL 11/4/2004.
36. Rheumatoid Arthritis. University of Illinois Family Practice Resident Lecture, Chicago, IL. 9/2/2005.
37. Update in Rheumatology. Advocate Illinois Masonic Medical Center Department of Medicine Grand Rounds, Chicago, IL. 9/7/2005.
38. Managing Arthritis Pain: The current Climate of Treatment. Health Education Alliance, Inc, Orland Park, IL. 12/10/2007

RESEARCH ACTIVITIES

PRIMARY INVESTIGATOR

Novartis 2011 – Ongoing	CAIN457F2309: A randomized, double-blind, placebo- and active-controlled study of secukinumab to demonstrate the efficacy at 24 weeks and to assess the safety, tolerability and long-term efficacy up to 1 year in patients with active rheumatoid arthritis who have an inadequate response to anti-TNFa agents.
Eli Lilly 2011 – Ongoing	H9B-MC-BCDP: A phase 3b, multicenter, open-label study to evaluate the long-term safety and efficacy of LY2127399 in patients with rheumatoid arthritis (RA).
Stryker Biotech 2011 – Ongoing	10-OA-004: An open-label, safety extension study of repeat dosing with intra-articular bone morphogenetic protein (BMP-7) in subjects with osteoarthritis (OA) of the knee.
Eli Lilly 2010 – Ongoing	H9B-MC-BCDO: A phase 3, multi-center, randomized, double-blind, placebo-controlled study to evaluate the safety and efficacy of LY2127399 in patients with rheumatoid arthritis (RA) with or without background disease-modifying anti-rheumatic drug (DMARD) therapy.
Stryker Biotech 2010 – 2011	09-OA-002: A phase 2, double-blind, randomized, placebo-controlled, proof of concept, dose-finding study of intra-articular bone morphogenetic protein (BMP-7) in subjects with osteoarthritis (OA) of the knee.
Horizon Therapeutics 2009 – 2011	HZ-CA-401: Open-label safety study of HZT-501 in patients who require long-term daily non-steroidal anti-inflammatory drug treatment.
Pfizer 2009 – 2011	A4091016: A phase 3, multi-center, randomized, long-term study of the safety of Tanezumab in patients with osteoarthritis of the knee or hip.
Eli Lilly 2009 – 2010	F1J-MC-HMGP: Duloxetine 60 mg once daily versus placebo in the treatment of patients with osteoarthritis knee pain.

Roche 2009 – 2011	ML 22533/B: An open-label, randomized study to evaluate the safety, tolerability and efficacy of tocilizumab (TCZ) monotherapy or TCZ in combination with non-biologic disease modifying anti-rheumatic drugs (DMARDs) in patients with active rheumatoid arthritis who have an inadequate response to current non-biologic or biologic DMARDs.
Pfizer 2009 – 2010	A4091015: A phase 3 randomized, double-blind placebo and Naproxen-controlled multi-center study of the analgesic efficacy and safety of Tanezumab in patients with osteoarthritis of the knee.
Genentech 2009 – 2011	ACT 4562g: A phase 2, randomized, double-blind, parallel group study to evaluate the efficacy and safety of ocrelizumab in combination with methotrexate compared with Infliximab plus methotrexate in patients with active rheumatoid arthritis currently responding inadequately to Etanercept or Adalimumab.
Anika Therapeutics 2008 – 2009	Monovisc-0802: A study of the safety of repeat injection of intra-articular MONOVISC sodium hyaluronate in patients with osteoarthritis of the knee.
Anika Therapeutics, 2008 – 2009	Monovisc-0702: A randomized, double-blind, placebo-controlled, multi-center study of a single injection cross-linked sodium hyaluronate (HA) to provide symptomatic relief of osteoarthritis of the knee.
Genentech 2007 – 2011	WA20495/ACT3986g: A randomized, double-blind, parallel group, international study to evaluate the safety and efficacy of ocrelizumab compared to placebo in patients with active rheumatoid arthritis who have an inadequate response to at least one anti-TNF therapy.
Genentech 2006 – 2011	WA20494/ACT3985g: A randomized, double-blind, parallel group, international study to evaluate the safety and efficacy of ocrelizumab compared to placebo in patients with active rheumatoid arthritis continuing methotrexate treatment.
Novartis 2006 – 2009	CZOL446H2409: A one-year partial double-blinded, randomized, multi-center, multi-national study to assess the effects of combination therapy of annual zoledronic acid (5mg) and daily subcutaneous teriparatide (20 mcg) on postmenopausal women with severe osteoporosis.
Abbott Laboratories 2005 – 2006	M04-684-002: Humira efficacy response optimization study in subjects with active rheumatoid arthritis (HERO).
Eli Lilly 2004 – 2011	B3D-US-GHCQ: FORTEO observational study.
Abbott 2002 – 2003	M02-498: A multi-center study of the safety of human anti-TNF monoclonal antibody adalimumab (D2E7) in subjects with active rheumatoid arthritis.

Fujisawa 2002 – 2004	01-0-103: A randomized, double-blind study to assess the efficacy of tacrolimus (prograf) + methotrexate vs. placebo + methotrexate in the treatment of rheumatoid arthritis in patients with partial response to methotrexate.

CO-INVESTIGATOR

Crescendo Bioscience 2012 – Ongoing	999RA002: Biomarkers of Anti-TNF-α Therapy Efficiency in Rheumatoid Arthritis to Define Unresponsive Patients.
Pfizer 2011 – Ongoing	A3921129: A randomized, double-blind, placebo-controlled phase 2 study to assess the immune response following administration of influenza and pneumococcal vaccines to subjects with rheumatoid arthritis receiving CP-690,550 or placebo CP-690,550 with and without background methotrexate.
Roche 2010 – Ongoing	WA22762: A randomized, double-blind, parallel group study of the safety and effect on clinical outcome of tocilizumab SC versus tocilizumab IV, in combination with traditional disease modifying anti-rheumatoid arthritis drugs (DMARDs), in patients with moderate to severe active rheumatoid arthritis.
Roche 2009 – Ongoing	WA19926: A multi-center, randomized, double-blind, parallel group study of the safety, remission and prevention of structural joint damage during treatment with Tocilizumab (CZ), as a monotherapy and in combination with methotrexae (MTX), versus methotrexate in patients with early, moderate to severe early rheumatoid arthritis (RA).
UCB 2009 – 2011	C87084: A phase 3b, multi-center open-label, follow-up study to evaluate the safety and efficacy of certolizumab pegol administered concomitantly with methotrexate in patients with active rheumatoid arthritis who participated in C87077.
Pfizer 2009 – Ongoing	A3921044: A phase 3 randomized, double-blind, placebo-controlled study of the efficacy and safety of 2 doses of CP-690,550 in patients with active rheumatoid arthritis on background methotrexate.
Pozen, Inc. 2008 – 2009	PN 400-307: A randomized, double-blind, parallel group, placebo-controlled multi-center study evaluating the efficacy of PN 400 BID and Celecoxib 200 mg QD in patients with osteoarthritis of the knee.
Merrimack 2008 – 2008	MM-093-01-OLE2: An open-label, multi-center, long-term extension study to assess the safety, tolerability, and efficacy of MM-093 treatment in subjects with rheumatoid arthritis who completed participation in protocol MM-093-01-201.
Pfizer 2007 – 2012	A6171016: A 2-year randomized, double-blind, parallel group, placebo-controlled study to investigate the safety and efficacy of orally administered SD-6010 in subjects with symptomatic osteoarthritis (OA) of the knee.

Merrimack 2007 – 2008	MM-093-01-201: A phase 2, double-blind, placebo-controlled study to evaluate the efficacy and safety of 60 mg of MM-093 versus placebo in patients with active rheumatoid arthritis on stable doses of methotrexate.
UCB 2007 – 2011	C87077: Evaluation of the safety and efficacy of an Certolizumab Pegol-administered concomitantly with a stable-dose methotrexate in patients with active rheumatoid arthritis (RA).
Pfizer 2007 – Ongoing	A3921024: A long-term, open-label follow-up study of Tasocitinib (CP-690,550) for treatment of rheumatoid arthritis.
Pfizer 2007 – 2008	A3921035: A phase 2b, randomized, double-blind, placebo-controlled active-comparator, multi-center study to compare 5 dose regimens of CP-690,550 and Adalimumab versus placebo, administered for 6 months in the treatment of subjects with active rheumatoid arthritis.
Smith & Nephew 2007 – 2009	SU-SHO-0106: A multi-center, randomized, double-blind, placebo controlled trial of three injections of SUPARTZ (sodium hyaluronate) for the treatment of chronic shoulder pain associated with glenohumeral osteoarthritis.
Hoffmann-La Roche, Inc. 2006 – Ongoing	WA 18696: A long-term extension study of safety during treatment with tocilzumab (MRA) in patients completing treatment in MRA core studies.
TAP 2003 – 2007	C02-021: A phase 3, open-label study, randomized, allopurinol-controlled study to assess the long-term safety of oral febuxostat in subjects with gout.
Novartis 2003 – 2007	CZOL446H2310: A multi-national, multi-center, double-blind, randomized, placebo-controlled, parallel group study assessing the efficacy of intravenous zoledronic acid in preventing subsequent osteoporotic fractures after a hip fracture.
Merck & Company, Inc. 2003 – 2006	MK-0663-072-00: A randomized, double-blind, multi-center study to evaluate the tolerability and effectiveness of etoricoxib 90 mg Q.D. versus diclofenac sodium 75 mg B.I.D. in patients with rheumatoid arthritis.
Pfizer 2003 – 2004	A3191082: A double-blind, placebo-controlled study of the efficacy and tolerability of once daily celebrex (celecoxib) vs. placebo in the treatment of subjects with osteoarthritis of the knee non-responsive to naproxen and ibuprofen.
Merck 2003 – 2005	MK-0217-211-10: A 12-month extension to: a randomized, double-blind, double-dummy, parallel group, multi-center study to evaluate and compare the effects of once weekly alendronate and risedronate on bone mineral density in postmenopausal women with osteoporosis (FOSAMAX ACTONEL Comparison Trial - FACT).

Merck & Company, Inc. 2002 – 2004	MK-0663-061-00: A randomized, double-blind, multi-center study to evaluate the tolerability and effectiveness of etoricoxib 90 mg Q.D. vs. diclofenac sodium 50 mg T.I.D. in patients with osteoarthritis (OA).
Merck 2003 – 2004	MK-0217-219-00: A randomized, double-blind, multi-center, placebo-controlled study to compare the safety and tolerability of an oral buffered solution of alendronate sodium 70 mg once weekly versus placebo for the treatment of osteoporosis in postmenopausal women.
Merck & Company, Inc. 2003 – 2004	MK-0996-219-00: A randomized, placebo-controlled, parallel group, double-blind, study to evaluate the safety and efficacy of rofecoxib 12.5 mg and celecoxib 200 mg in patients with osteoarthritis of the knee.
Merck & Company, Inc. 2003 – 2006	MK-0663-066-02: A randomized, double-blind, active-comparator-controlled, parallel group study to evaluate the safety of etoricoxib in patients with osteoarthritis or rheumatoid arthritis.
Aventis 2002 – 2004	HMR 4003F/4001: A one-year, multi-center, randomized, double-blind, placebo-controlled, parallel group study to determine the efficacy and safety of 35-mg risedronate administered once a week in the prevention of osteoporosis in postmenopausal women.
Merck 2002 – 2004	MK-0217-211-00: A randomized, double-blind, double-dummy, parallel group, multi-center study to evaluate and compare the effects of once weekly alendronate and risedronate on bone mineral density in postmenopausal women with osteoporosis.
Amgen 2002 – 2008	16.0035: Rheumatoid arthritis DMARD intervention and utilization study (RADIUS 2).
TAP 2002 – 2003	C02-009: A phase 3, randomized, multi-center allopurinol and placebo-controlled study assessing the safety and efficacy of oral febuxostat in subjects with gout.
Amgen 2001 – 2007	16.0034: Rheumatoid arthritis DMARD intervention and utilization study.
Lilly 2002 – 2004	H3S-US-GGKO: Raloxifene alendronate comparison in postmenopausal women with low bone mass.
Pfizer 2001 – 2005	A2181002: Postmenopausal evaluation and risk-reduction with lasofoxifene.
Pfizer 2001 – 2003	A2581049: A double-blind, placebo-controlled, dose-ranging trial to evaluate the efficacy of atorvastatin on bone mineral density and markers for bone turnover in postmenopausal women with dyslipidemia and at risk for osteoporosis.