

The Anatomy, Diagnosis, and  
Treatment of Chronic Myofascial Pain with

# *Prolotherapy*

OCTOBER 17-19, 2019

**Dextrose Perineural  
Injection Therapy for Lower  
Extremity Neuropathies**

OCTOBER 15, 2019

**Research Symposium**

OCTOBER 16, 2019

The Lowell Inn and Conference Center  
The Pyle Center  
Madison, Wisconsin

Jointly Provided by

University of Wisconsin  
School of Medicine and Public Health

Department of Family Medicine  
and Community Health

University of Wisconsin—Madison  
Interprofessional Continuing Education  
Partnership (ICEP)

and

The Hackett Hemwall Patterson  
Foundation



HACKETT HEMWALL PATTERSON  
FOUNDATION



Interprofessional  
Continuing Education Partnership  
UNIVERSITY OF WISCONSIN—MADISON

School of Medicine  
and Public Health  
School of Nursing  
School of Pharmacy

## Statement of Need

The treatment of chronic pain is a complex, multifaceted problem. The faculty of this activity offer participants detailed instruction in the use of prolotherapy, with basic and advanced techniques, to treat laxity of ligaments that often cause chronic myofascial pain. Due to more active lifestyles, an aging patient population, and patient desire for relief of chronic pain, prolotherapy is an elegant, effective and safe treatment.

## Target Audience and Scope of Practice

This educational activity has been designed to meet the needs of physicians, and those practitioners who manage patients through the diagnosis and treatment of chronic pain due to ligament instability.

## Elements of Competence

This CE activity has been designed to change learner competence and focuses on the American Board of Medical Specialties areas of patient care and procedural skills, medical knowledge, and practice-based learning and improvement.

## Activity Overview

The needs will be addressed by the use of lectures, extensive anatomy review, discussion, demonstrations and practice injections on cadavers with C-arm guidance, and viewing of injection videos with a faculty member and model. The hands-on workshops will enable the conferee to have practical training in palpation and marking for prolotherapy. Discussions of prolotherapy indications and complications along with a panel discussion of complicated cases will enhance the participant's learning.

## Learning Objectives

At the conclusion of this activity, participants will be able to:

- Recognize new clinical science research in injection therapy for musculoskeletal conditions including knee osteoarthritis, low back pain and tendinopathies
- Review ongoing clinical research on the use of other regenerative injection techniques including platelet rich plasma
- Identify the role of dextrose perineural therapy in the treatment of neuropathic pain
- Identify the anatomy of ligaments
- Participate in C-arm guided cadaver injections
- Identify the role of ultrasound imaging in prolotherapy treatments
- Illustrate complications, and ways to avoid complications, when treating patients with prolotherapy
- Observe video of injections with faculty moderating with a model
- Obtain insight into bio-tensegrity
- Recall new advances in the use of several injection solutions, including PRP and stem cells for musculoskeletal diagnosis and treatment
- Describe advanced prolotherapy treatment protocols for the treatment of chronic pain
- Identify ways to promote a prolotherapy practice

## Conference Highlights

- Most comprehensive prolotherapy conference teaching of the whole body
- Nationally and internationally recognized faculty of 43 experts
- 18 didactic lectures on prolotherapy with demonstrations
- 8 hours of hands-on workshops taught by prolotherapists

- Cadaver lab where participants will do multiple injections
- 21.5 AMA PRA Category 1 Credits™

## Pre-Conference Highlights

### Dextrose Perineural Injection Therapy for Lower Extremity Neuropathies

- In depth discussion of the evolution and newest insights of Perineural Dextrose Injection Therapy, advanced by Dr. John Lyftogt, for the treatment of chronic pain
- Review of nerve neurodynamics and pathology in entrapment syndromes
- Outline the basic science of dextrose nerve blocks and review the nerve anatomy of the pelvis, hip and lower extremity
- Demonstrate landmark and palpation guided perineural dextrose injection techniques for common pelvis, hip and lower extremity pain syndromes secondary to nerve entrapments with an introduction to ultrasound guided nerve hydrodissection techniques
- 7.75 AMA PRA Category 1 Credits™

### Research Symposium

- Will bring active clinicians and researchers together to present completed & ongoing research in prolotherapy and related injection therapies for soft tissue pathology
- In-depth discussions of new clinical science research in injection therapies
- Review ongoing clinical research on the use of radiologic guidance and assessment in the context of injection therapy
- 7.75 AMA PRA Category 1 Credits™

## Madison At A Glance

A progressive and cosmopolitan city of 250,000, Madison is home to the world-class University of Wisconsin, the seat of state government, and an eclectic, electric atmosphere that energizes any visitor's stay. Built on a narrow isthmus between Lakes Monona and Mendota, Madison is one of the nation's most scenic cities. Five area lakes and more than 200 parks provide countless recreational activities, from swimming, sailing and fishing to biking, hiking, inline skating and more. Madison offers both small town charm and a range of cultural and recreational opportunities usually found in much larger cities. Very convenient for visitors to Madison are 39 bike rental "stations" with 350 E-bikes that can be rented by the half hour or longer. This is a great way to explore Madison with its 275 miles of bike paths and lanes! (Bring your own helmet.)

## Conference Venue

The Lowell Inn and Conference Center is a University of Wisconsin facility, located in the heart of the UW campus at 610 Langdon Street. The center has conference rooms, dining facilities, lounges and a swimming pool with sauna. On-site parking for **hotel guests** is \$10 per day; complimentary parking for hotel guests is available nearby. Lowell Inn has 137 guest rooms which have recently been remodeled and upgraded. Didactic sessions on **Thursday and Saturday** will be held at the **Pyle Center**. It is a pleasant 1-block walk between the two venues. **Tuesday, Wednesday and Friday** sessions will be held at the **Lowell Center**.

## Conference Attire

On Friday, for our hands-on workshops, comfortable casual clothing is suggested. Since meeting room temperatures and personal comfort levels vary, it is recommended that you bring a sweater or jacket for the lecture days. Casual clothing is appropriate for the entire conference.

## Dates

**Dextrose Perineural Injection Therapies for Lower Extremity Neuropathies**  
**October 15, 2019 (Wednesday); 8:00 AM–5:30 PM**

**Research Symposium Pre-Conference Session**  
**October 16, 2019 (Wednesday); 8:00 AM–5:30 PM**

## Conference

**October 17-19, 2019 (Thursday–Saturday)**

## Conference Location and Accommodations

Lowell Inn and Conference Center  
610 Langdon Street  
Madison, WI 53703

To make hotel room reservations at Lowell, please call: 608-256-2621 or 866-301-1753. Email: Lowell@ecc.uwex.edu. A block of rooms has been reserved. These rooms will be held for our conference until **September 15, 2019 or until block is sold out**. The room rate is from \$115 to \$124 per night (standard room to deluxe room). The name on the block of rooms is: **Prolotherapy**.

## On-site Conference Check-in

**New registrations will NOT be accepted on day of conference**

October 15, 2019: 7:00 - 8:00 AM  
October 16, 2019: 7:00 - 8:00 AM and 4:30 - 7:00 PM  
October 17, 2019: Starting at 7:00 AM at the Pyle Center

## Program Changes

Emergency situations occasionally occur and may necessitate topic or speaker change. The University of Wisconsin–Madison ICEP reserves the right to alter or substitute a topic or speaker without prior notification.

## Course Materials

The conference syllabus will be posted online (the link will be sent to registered participants **approximately** one week before the conference). WiFi is available at both Lowell and Pyle Center.

## Cancellations/Refund Policy

All cancellations must be received on or before **October 7, 2019**. This will allow wait-listed people to take the place of a cancellation, if one occurs. Cancellations received on or before October 7, 2019 will receive a refund; cancellations after that time will not receive a refund. **All cancellations will be charged a processing fee of \$100.**

## Credit

### Accreditation Statement



In support of improving patient care, this activity has been planned and implemented by the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP) and The Hackett Hemwall Patterson Foundation. The University of Wisconsin–ICEP is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

### Credit Designation Statement

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 37 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Dextrose Perineural Injection Therapy = 7.75 AMA PRA Category 1 Credits**<sup>™</sup>

**Research Symposium = 7.75 AMA PRA Category 1 Credits**<sup>™</sup>

**Conference = 21.5 AMA PRA Category 1 Credits**<sup>™</sup>

### Continuing Education Units

The University of Wisconsin–Madison, as a member of the University Continuing Education Association (UCEA) authorizes this program for a maximum of 3.7 continuing education units (CEUs) or 37 hours.

### Policy on Disclosure

It is the policy of the University of Wisconsin–Madison ICEP that the faculty, authors, planners, and other persons who may influence content of this CE activity disclose all relevant financial relationships with commercial interests in order to allow CE staff to identify and resolve any potential conflicts of interest. Faculty must also disclose any planned discussion of unlabeled/unapproved uses of drugs or devices during their presentation(s). Detailed disclosures will be available prior to the start of the activity.

### Special Dietary Needs

Vegetarian selections will be available at all provided meals. If you require additional assistance, contact Mary Doherty **at least 2 weeks** before the conference at: mdoherty@wisc.edu.

### For Further Information

Mary P. Doherty  
608-712-5518  
mdoherty@wisc.edu

## Pre-Conference Sessions

### Dextrose Perineural Injection Therapy for Lower Extremity Neuropathies

Liza Maniquis-Smigel, MD  
Eric Phillippi, MD

#### TUESDAY, OCTOBER 15, 2019

AM	
8:00	Welcome and Administrative Remarks
8:10	The Evolution of Dextrose Perineural Injection Treatment: How it has Revolutionized the Approach to Pain Treatment
8:30	Nerve Neurodynamics and Pathology: How It Goes Wrong? Neuropathic Pain and Entrapment Syndromes
9:00	The Basic Science of Dextrose Nerve Blocks
9:30	Pre and Post Care Instructions for Perineural Injection Treatments
9:45	Break
10:00	Nerve Anatomy of Anterior Pelvis and Hip
11:00	Marking and Injection Demonstration of Anterior Pelvis and Hip
PM	
12:30	Lunch
1:30	Nerve Anatomy of Posterior Pelvis and Hip
2:00	Marking and Injection Demonstration of Posterior Pelvis and Hip
2:30	Nerve Anatomy of Knee
3:00	Marking and Injection Demonstration of the Knee Region
3:45	Break
4:00	Nerve Anatomy of the Ankle and Foot
4:30	Marking and Injection Demonstration of Ankle and Foot Region
5:00	Ultrasound Guided Hydro-Dissection: A Targeted Ultrasound Guided Nerve Block and Hydro-Dissection to Deeper Nerves Involved in Nerve Entrapment Syndromes
5:30	Adjourn

## Research Symposium

Greetings! Welcome to the fifteenth annual UW Hackett Hemwall Patterson Foundation Prolotherapy Research Symposium. The past year has been an active and exciting year in prolotherapy and regenerative injection medicine research. In this year's conference, speakers will review ongoing and recently published clinical research on prolotherapy and related injection therapy.

This annual meeting brings together clinicians, clinical researchers and basic scientists interested in research of prolotherapy and related injection therapies. Each speaker is an active clinician and/or researcher who will present completed or ongoing findings. The overall tone of the conference is participatory and collaborative. Our primary goal is to facilitate a high level of understanding of current research and to stimulate further work among researchers and clinicians. We hope you enjoy the day!

#### WEDNESDAY, OCTOBER 16, 2019

AM		
8:00	Growth in Research	David Rabago, MD
<b>Morning Sessions</b>		
8:30	Prolotherapy for Knee Osteoarthritis: A Translational Perspective	David Rabago, MD
	Intra-articular Prolotherapy for Knee Osteoarthritis: A One Year Blinded RCT	Regina Sit, MBBS(HK)
	Cytokine Changes after Knee Intra-articular Dextrose Injection	Ines Guerrero Pestardo, MD
10:00	Refreshment Break	
10:30	From Registry-Based Studies to Randomized Controlled Trials: What's Next for Stem Cells	Christopher Centeno, MD
	Platelet Rich Plasma (PRP) for Tendinopathy: The Wisconsin Studies	Kenneth Lee, MD
	Innovative Orthobiologic Treatments for Advanced Osteoarthritis	Danielle Aufiero, MD
	In-Office PRP Preparation: Clinical and Biological Characteristics	Theodore Harrison, MD, MBA

Consistent with the industry standard in educational conferences such as this one, photographs and videotaping are not allowed.

## Research Symposium (continued)

PM		
12:30	Lunch	
	<b>Afternoon Sessions</b>	
1:30	There and Back Again: Update on International Prolotherapy Collaborations	K. Dean Reeves, MD
	Effectiveness of Regenerative Injection Therapy in Tendinopathy: Does Anatomical Location Matter	Chueh-Hung Wu, MD
	Results of an RCT Assessing Hypertonic Dextrose for Temporomandibular Disorder: Implications for General Practice	Miguel Zárate, MD; Ricardo Frusso, MD
3:15	Refreshment Break	
3:30	Pushing Dextrose: Epidural Injection for Low Back Pain in a 3-part Mixed Methods Study	Liza Maniquis-Smigel, MD
	Common Areas of Myofascial Laxity in Chronic Low Back Pain: A Pilot Study	Emily Molina, MD
	Multiple Modality Care for Chronic Low Back Pain: A Quality Improvement Project	Bobby Nourani, DO
	Concluding Remarks: Collegiality, Collaboration and Continuing Way Forward	David Rabago, MD
5:30	Adjourn	
5:30-7:15	Reception – Wisconsin Idea Lounge <b>Dinner on your own.</b>	

## Conference Schedule 2019

THURSDAY, OCTOBER 17, 2019

AM		
6:45	Breakfast – Dining Room (Lower Level) Lowell Inn & Conference Center <b>Lectures, Breaks and Lunch will take place at the Pyle Center – 1 block walk from Lowell Center</b>	
7:45	Welcome, Administrative Remarks	Brian Ralston, MD; Annette Zaharoff, MD; Mary Doherty
8:00	Introduction to Prolotherapy: Safe, Simple, Effective, Elegant	Annette Zaharoff, MD
8:30	Anatomy & Injection Techniques: Knee	Tricia Croake-Uleman, MD
9:15	Anatomy & Injection Techniques: Hip & Anterior Pelvis	Brian Ralston, MD
9:45	Anatomy & Injection Techniques: L/S spine, Posterior Pelvis	Joel Baumgartner, MD
10:15	Anatomy & Injection Techniques: Foot & Ankle	Linh Vuong, MD
10:45	Refreshment Break – Lobby	
11:10	Anatomy Demonstration: Knee	Tricia Croake-Uleman, MD
11:30	Anatomy Demonstration: Hip & Anterior Pelvis	Brian Ralston, MD
11:50	Anatomy Demonstration: L/S, Posterior Pelvis	Joel Baumgartner, MD
PM		
12:10	Anatomy Demonstration: Foot & Ankle	Linh Vuong, MD
12:30	Lunch – Dining Room – Pyle Center	
1:30-3:30	Optional Advanced Session for experienced prolotherapists	Andrew Kochan, MD; Adrian Gretton, MD
1:30	Anatomy & Injection Techniques: Shoulder	Ripal Parikh, DO
2:00	Anatomy & Injection Techniques: Elbow, Wrist, Hand	Deborah Raehl, DO
2:30	Anatomy & Injection Techniques: Cervical Spine	Martin Gallagher, MD, DC
3:00	Anatomy & Injection Techniques: Thoracic Spine & Ribs	Bobby Nourani, DO
3:30	Refreshment Break – Lobby	
4:00	Anatomy Demonstration: Shoulder	Ripal Parikh, DO
4:20	Anatomy Demonstration: Elbow, Wrist, Hand	Deborah Raehl, DO
4:40	Anatomy Demonstration: Cervical Spine	Martin Gallagher, MD, DC
5:00	Anatomy Demonstration: Thoracic & Ribs	Bobby Nourani, DO
5:20	IART/HHPF Update	Brian Ralston, MD; Annette Zaharoff, MD
5:50	Summary & Wrap-up – including Friday Workshop Information	Annette Zaharoff, MD; Mary Doherty
6:00	Adjourn	
7:00	Dinner Presentation: HHPF/UW International Treating & Training Trips Lowell Center Dining Room	Mary Doherty David de la Mora, MD

**Consistent with the industry standard in educational conferences such as this one, photographs and videotaping are not allowed.**

## Conference Schedule 2019 (continued)

### FRIDAY, OCTOBER 18, 2019 – Lowell Conference Center

WORKSHOP SESSIONS: Each participant will rotate through all four workshops. Each rotation is indicated by the color coding on participant's name badge.

WORKSHOPS		WORKSHOP DIRECTORS	
The Art of Prolotherapy, Anatomical Relationships – Isthmus - North		Jon Trister, MD	
ProloSound: Utilizing Diagnostic Ultrasound to Complement Your Prolotherapy Skills – Isthmus - South		David Wang, DO; Craig Chappel, DO	
Anatomy Palpation, Examination and Marking Skills – Langdon Room		Joel Baumgartner, MD; Ali Safayan, MD	
Injection Demonstration of Cadavers, Participant Practice Lab - Mendota Room		James Nosal, MD; Michael Weber, MD; Young Uck Kim, MD	
AM		PM	
6:45	Breakfast – Dining Room	12:20-1:20	Lunch – Dining Room Lower Level
7:45	Orientation to Workshops – Isthmus North & South	1:20-3:20	Session 3
8:00-10:00	Session 1	3:30-3:50	Refreshment Break
10:00	Refreshment Break	3:50-5:50	Session 4
10:20-12:20	Session 2	5:50-7:30	Reception: Wisconsin Idea Lounge

### SATURDAY, OCTOBER 19, 2019

AM	Lectures & Breaks will take place at the Pyle Center	
7:25	Welcome	Annette Zaharoff, MD
7:30	First, Do No Harm: Prolotherapy Injection Safety	Deborah Raehl, DO
8:00	Injectant Solutions in Regenerative Medicine	Annette Zaharoff, MD
8:30	Prolotherapy Pearls: Possible Complications and How to Avoid Them	Craig Chappel, DO
9:00	Clinical Biotensegrity	Gary Clark, MD
9:40	Break – Lobby	
10:10	Review of Prolotherapy Clinical Research	Linh Vuong, MD
10:30	Building a Prolotherapy Practice	Joel Baumgartner, MD
11:00	Advanced Prolotherapy Case Studies	Young Uck Kim, MD
11:45	Panel Discussion: Prolotherapy Practices Around the World Moderator: Annette Zaharoff, MD	Andrew Kochan, MD; Young Uck Kim, MD; Martin Gallagher, MD, DC; Joel Baumgartner, MD; Liza Maniquis-Smigel, MD; David Wang, MD
12:30	Adjourn	

## Registration

**The Anatomy, Diagnosis, and Treatment of Chronic Myofascial Pain with Prolotherapy, Research Symposium, and Dextrose Perineural Injection Therapy for Lower Extremity Entrapment Neuropathies**

October 15-19, 2019

### Two Easy Ways to Register

**Online:** <https://bit.ly/2TirPEW>

**By Phone:** 608-262-1397. Please call to register and give your credit card information (MasterCard, VISA). Please specify course number: **4017**.

**Please Note:** Your registration will not be confirmed until payment is made in full. Please direct questions to: Mary Doherty ([mdoherty@wisc.edu](mailto:mdoherty@wisc.edu))

Please register early. Enrollment will be limited. We anticipate that the conference will be filled to capacity. All registrations will be confirmed via email. If you do not receive a confirmation, please call 608-262-1397.

## Registration Fees

\$2,300 – Conference Registration (October 17-19, 2019)

\$400 – Research Symposium (October 16, 2019)

\$450 – Dextrose Perineural Injection Therapy (October 15, 2019)

Register for all three sessions and receive a **10% discount!**

**Total \$2,835**

Register for the Research Day and the main conference and receive a **5% discount! Total \$2,565**

The fees include the cost of tuition, course materials; breakfasts; lunches Tuesday, Wednesday, Thursday and Friday; breaks all days, and dinner on Thursday evening. **Meals and breaks are for registered attendees only.** Guests may join you for meals - see pricing below.

Fee for accompanying guests - meals/receptions: *(Prices subject to change.)*

\$42.20 (\$40 plus tax) Dextrose PIT Session - Tuesday lunch and breaks

\$52.75 (\$50 plus tax) Research Symposium, lunch & reception

\$105.50 (\$100 plus tax) Conference - 2 lunches, Thursday dinner, Friday reception

\$63.30 (\$60 plus tax) Conference - Dinner Thursday evening, Friday reception

## Planning Committee & Course Directors

### David Rabago, MD

Associate Professor, Department of Family Medicine and Community Health, University of Wisconsin School of Medicine and Public Health

### Annette Zaharoff, MD

Medical Director, The Non-Surgical Center of Texas

### Mary Doherty

Activity Coordinator; Vice President, Hackett Hemwall Patterson Foundation

### Laura Cruz

Hackett Hemwall Patterson Foundation

### Terese Bailey

Accreditation Specialist, University of Wisconsin—Madison ICEP

## Faculty

\* = Research Symposium faculty

† = Conference faculty

### Danielle Aufiero, MD\*

Dr. Aufiero is a board-certified physical medicine and rehabilitation physician, an assistant clinical professor of medicine at David Geffen School of Medicine at UCLA and at Western University of Health Sciences, and an adjunct assistant professor at Touro University. She is a partner at the Orthohealing Center in Los Angeles, CA, and co-founder of the Orthohealing Method, advocating a standardized approach to orthobiologics with registry data collection. Dr. Aufiero has published multiple peer reviewed articles and frequently lectures on orthobiologics to advance the field.

### Joel Baumgartner, MD†

Dr. Baumgartner is board certified in family medicine and sports medicine. He specializes in non-surgical orthopedics, sports medicine, and regenerative orthopedics. As the founder of Rejuv Medical in Waite Park, MN, he utilizes the latest in diagnostic and treatment technology to better treat musculoskeletal injury and pain. Dr. Baumgartner's new ultrasound guided Regenerative Injection Manual is now complete. He also recently authored a book for the general public entitled Regenerate: Body Heal Thyself without Drugs or Surgery. It explains how lifestyle changes can augment the body's ability to heal and regenerate. He has a passion for training and helping other physicians create a practice model that will thrive in our competitive markets.

### Christopher Centeno, MD\*

Dr. Centeno is the medical director of the Centeno-Schultz clinic in Colorado, the world's largest interventional orthobiologics practice. He is involved in active clinical and bench science research on the use of bone marrow concentrate and other stem cell therapies and has published more than 25 peer-reviewed papers on the topic. He was a founder of the Interventional Orthopedics Foundation and his clinic runs a fellowship in interventional orthobiologics.

### Craig Chappell, DO†

Dr. Chappell is board certified in sports medicine, family medicine, and osteopathic manipulative medicine (OMM). He has been performing regenerative injections with the use of ultrasound guidance for the past 10 years and has taught regenerative injection technique nationally and internationally. Dr. Chappell specializes in non-surgical orthopedic, sports medicine, and regenerative medicine at in2itMedical in Pleasant Grove, UT. He has served with the HHPF in Honduras and Mexico and lectured at the Madison conference.

### Gary Bruce Clark, MD†

Dr. Clark is board certified in anatomical/clinical pathology and neuropathology. As a "recovering pathologist" he has morphed, specializing in orthopedic medicine over the last 25 years with special interest in regenerative medicine, including prolotherapy and PRP. He has participated in 10 HHPF Honduran trips, four Mexico trips, and several Madison conferences, serving as faculty on many occasions. He has contributed to the HHPF Procedure Standardization Program. He has a busy practice in Boulder,

Colorado, where he runs a solo musculoskeletal clinic. He is currently writing a book on orthopedic medicine with special focus on clinical biotensegrity as illustrated by sacroiliac joint displacement.

### Tricia Croake-Uleman, MD†

Dr. Croake-Uleman is a board-certified family medicine physician in Mason, Ohio. She owns Southwest Ohio Health Partners and Southwest Ohio Pain Management. Her practice involves treating pain and musculoskeletal injuries using interventional pain management techniques, prolotherapy/ PRP, perineural therapy, physical therapy, counseling and nutrition. Dr. Croake-Uleman has served with HHPF in Mexico and Honduras.

### David de la Mora, MD†

Dr. de la Mora is the director of the HHPF Guadalajara chapter and organizes the annual HHPF Prolotherapy and Vein Medical Brigade trip to Mexico. He has attended the Madison conference for 15 years, both as a participant and faculty member, and has also served as a clinic director on the HHPF Honduras trips. Dr. de la Mora has a full time prolotherapy practice in Mexico.

### John Finkinstadt, MD† (HHPF BOD)

Dr. Finkinstadt's medical practice in Syracuse, NY, is devoted solely to the treatment of musculoskeletal pain. He is board certified in family medicine with a CAQ in sports medicine. He is also certified in acupuncture and has completed a five-year course of study at the Canadian College of Osteopathy. Dr. Finkinstadt has served as faculty on HHPF trips to Honduras and at the Madison conference.

### Ricardo Frusso, MD\*

Dr. Frusso is a certified family medicine physician and pain doctor. He is certified by AAOM in prolotherapy, has a master's degree in Lyfotog Perineural Injection Therapy (PIT) and is a sports medicine physician in the Hospital Italiano de Buenos Aires, Argentina (HIBA). In addition to his clinical practice, he does research and teaches prolotherapy and Lyfotog PIT. Dr. Frusso is one of the directors of the University Workshop of Myofascial Pain in the HIBA and coordinates a group of family physicians who treat chronic pain.

### Brad Fullerton, MD\*

Dr. Fullerton is board certified in physical medicine and rehabilitation. His private practice, ProloAustin, is focused on musculoskeletal diagnosis and treatment using ultrasonography and prolotherapy. He is a past president of AAOM and serves as clinical assistant professor, Department of Internal Medicine, Texas A & M College of Medicine. His research interest is in the use of ultrasonography and biotensegrity concepts to explain the clinical efficacy of prolotherapy. He has presented regularly at HHPF research day and the clinical conference since 2005.

### Martin Gallagher, MD, DC, ABOIM†

Dr. Gallagher is uniquely licensed as a board-certified family physician, chiropractor, and medical acupuncturist. He is the director of Integrative Medicine at Medical Wellness Associates, where he combines prolotherapy, ozone, acupuncture, chiropractic, and IV nutritional protocols to reverse chronic disease. Dr. Gallagher is on the faculty in the Department of Family Medicine at West Virginia University. He established the first family medicine residency in the US where select residents graduate double boarded in family medicine and medical acupuncture. Dr. Gallagher is a board member of IART, AAOM and a frequent participant at the HHPF conferences.

### Adrian Grettton, MD†

Dr. Grettton trained as a family physician in Calgary, AB, Canada and has developed an active interest in pain and injury management. He has more than a decade of experience in prolotherapy at the Advanced Spinal Care Center in Calgary. Dr. Grettton leads a multidisciplinary team at the Calgary Chronic Pain Centre. He has served with the HHPF in Mexico and Honduras and has taught at the Madison conference for over 10 years.

### Ines Guerrero Pestalardo, MD\*

Dr. Ines Guerrero Pestalardo obtained her MD from Austral University of Buenos Aires, Argentina, and PM&R residency at Graduate Hospital de Rehabilitacion Manuel Rocca in Buenos Aires, Argentina. Her continuity clinical practice in Interventional Regenerative Orthopedic Medicine is in Buenos Aires and Rosario, Argentina. Dr. Guerrero is currently serving as the

president of the Latin-American Association of Orthopaedic Medicine (AAOM), an international non-profit organization of physicians dedicated to the promotion of regenerative medicine education around Latin America. Since last year, she has been investigating changes in cytokines after prolotherapy with Dr. Gaston Topol.

### Jay Harms, MD†

Dr. Harms is in practice in Peoria, IL, and is board certified in family medicine. In his medical practice, he cares for the entire range of family medicine patients, including chronic pain patients. Dr. Harms has been an active member of the HHPF since 2003, serving in the capacity of volunteer and faculty in Honduras and at the Madison conference.

### Theodore Harrison, MD, MBA\* (HHPF BOD)

Dr. Harrison is board certified in emergency medicine and anti-aging and regenerative medicine. He practiced emergency and critical care medicine in the Baltimore area for 20+ years before focusing on regenerative medicine. Dr. Harrison trained in prolotherapy at the University of Wisconsin/HHPF and also trained at the Ageless Regenerative Institute in Florida in the techniques of stem cell extraction and fat transfer graft. He has written a book for the lay public on regenerative medicine and is currently in practice at Rejuvacare PC in Port Angeles, WA.

### Aenaes Janze, MD† (HHPF BOD)

Dr. Janze is a board-certified physical medicine and rehabilitation physician and Director of Integrative Services at the William Beaumont Army Medical Center. Dr. Janze has spent the last 14 years working in Army Medicine bringing interventional regenerative orthopedic medicine techniques to injured soldiers to include dextrose prolotherapy, PRP, prolozone and perineural injection therapy. Dr. Janze blends these regenerative medicine techniques with acupuncture, manipulation, and movement pattern analysis to address both the structural and functional aspects of chronic pain.

### Young Uck Kim, MD†

Dr. Kim is an orthopedic surgeon in Seoul, South Korea. His clinic, Rapha Medience Orthopaedic Clinic, is a busy orthopedic surgery and prolotherapy practice. Over the past 19 years, he has observed the benefits of prolotherapy for his patients, and his practice performs more non-surgical procedures than orthopedic surgery. Dr. Kim utilizes ultrasound, mainly for academic purposes and research.

### William Knight, DO†

Dr. Knight is in practice in Metairie, LA, caring for patients with chronic pain and with other rehabilitation needs. He is board certified in physical medicine and rehabilitation. Dr. Knight has served with the HHPF as an instructor in Honduras and Mexico and at the Madison conference.

### Andrew Kochan, MD†

Dr. Andrew Kochan practices prolotherapy and other regenerative medical techniques in Los Angeles, CA, and near Monterey, CA. He is board certified in physical medicine and rehabilitation and is internationally recognized as an expert in apitherapy. He has been doing prolotherapy for 35 years and has taught prolotherapy in Honduras since 2003 and in Guadalajara and Madison for many years.

### Susan Lanza, MD†

Dr. Susan Lanza graduated in medicine and surgery from the University of Palermo, Italy, in 2003 and earned her second medicine and surgery degrees from the University of Caracas (UCV), Venezuela, in 2008. She is board certified in Italy with a specialization in sports medicine, has a master's in aesthetic medicine and is an instructor in neuralprolotherapy. Dr. Lanza has served as a prolotherapy instructor with the HHPF in Honduras, Mexico, and Madison for many years. She is also an instructor for SIPRO (Italian Prolotherapy Association) and for the European Mission of Prolotherapy in Italy and Greece. She has a private practice in various cities in Italy specializing in sports medicine, prolotherapy, ultrasound management and aesthetic medicine.

### Kenneth Lee, MD

Dr. Lee is a musculoskeletal radiologist in the Department of Radiology at the University of Wisconsin School of Medicine and Public Health (UW SMPH). His research and clinical interests include MSK US and minimally invasive therapies of sports

injuries, quantitative ultrasound elastography, and regenerative medicine therapies for overuse tendon injuries. He has received multiple peer-reviewed grant awards for team science research studies in tendon elastography and PRP therapies. He has published 45 peer-reviewed manuscripts and given over 170 national and international presentations.

#### **Liza Maniquis-Smigel, MD†**

Dr. Maniquis-Smigel is a diplomate of American Academy of Physical Medicine & Rehabilitation and of the American Academy of Regenerative Medicine. She is in private practice in Hawaii. Her special interests include treatment of musculoskeletal injuries with regenerative approach including prolotherapy, perineural injection treatment, prolozone, PRP and stem cell therapy. Dr. Maniquis-Smigel published three research articles on dextrose caudal epidural. She has served with the HHPF in Honduras and Mexico since 2003 and has often lectured at the Madison conference.

#### **Emily Molina, MD\***

Emily Molina is a first year internal medicine resident at Johns Hopkins Hospital. Prior to receiving her medical degree from Texas A&M College of Medicine, she pursued research in a cohort of rheumatoid arthritis patients in south Texas focusing on clinical outcomes. Her current research interests include myofascial pain, musculoskeletal anatomy, social determinants of health and quality patient care.

#### **William Mora, MD†**

Dr. Mora is board certified in family medicine, and he received a CAQ in sports medicine. He also received certification by the American Board of Integrative Holistic Medicine and the American Board of Medical Acupuncture. Dr. Mora trained in prolotherapy with Dr. Jeff Patterson at the UW School of Medicine and Public Health. He currently works in an integrative holistic functional medical practice in Sacramento, CA, with a focus on prolotherapy and regenerative injection therapy.

#### **Jim Nosal, MD†**

Dr. Nosal practices family medicine in Crandon, WI. He has been involved with prolotherapy at the HHPF conferences for many years.

#### **Bobby Nourani, DO\*†**

Dr. Nourani is an associate clinical professor at the University of California Irvine, Susan Samueli Integrative Health Center. He is the Inpatient Integrative Health medical director. He is board certified in family medicine, neuromusculoskeletal medicine, and pain medicine. He is also certified in medical acupuncture. Dr. Nourani has enjoyed serving with HHPF in Honduras and Mexico since 2010 and has lectured at the annual conference in Madison since 2014.

#### **Ripal Parikh, DO†**

Dr. Parikh is board certified in physical medicine and rehabilitation and pain management. He works in private practice, Regen Medical, focusing on regenerative medicine techniques including prolotherapy and PRP. He has been involved with HHPF since 2010 and has served in Honduras and Mexico.

#### **Eric Phillippi, MD†**

Dr. Phillippi operates a private practice procedure clinic in Madison, WI. At his practice, Medical Procedures of Wisconsin, he provides regenerative injections including prolotherapy, perineural injection therapy, PRP, and stem cell therapy. He also offers many outpatient surgical procedures including varicose vein treatments, vasectomy, and minor skin surgery. Board-certified in family medicine, he received his medical degree and completed residency training at the University of Wisconsin - Madison. He serves as an adjunct clinical faculty at the UW School of Medicine and Public Health teaching medical students in his course: Office-Based Procedures in Family Medicine.

#### **David Rabago, MD\*† (HHPF BOD)**

Dr. Rabago is a board-certified family medicine physician and associate professor at the UW School of Medicine and Public Health, and immediate past president of the HHPF. His clinical practice is in Madison, WI; his research endeavors include assessment of prolotherapy for chronic musculoskeletal conditions including knee osteoarthritis.

Dr. Rabago also mentors others in the design, conduct and publication of research devoted to prolotherapy and other injection therapies. He lectures nationally and internationally on these topics.

#### **Deborah Raehl, DO†**

Dr. Raehl is a board-certified family physician who has been teaching and practicing full-scope family medicine for over 20 years at Prevea Eau Claire Family Medicine Residency. Her special interests include treatment of the citizen athlete, prolotherapy, and osteopathic manipulative medicine. Dr. Raehl has served and taught with HHPF in Honduras, Mexico and at the Madison conference since 2009. She also serves as adjunct clinical faculty for University of Wisconsin Department of Family Medicine and Community Health and associate clinical professor for the Medical College of Wisconsin.

#### **Brian Ralston, MD† (President HHPF BOD)**

Dr. Ralston is a board-certified family medicine physician with a certificate of added qualifications in sports medicine, practicing in the Chicago area. Dr. Ralston is a faculty member of the MacNeal Family Medicine Residency Program, and clinical associate professor of medicine at the University of Chicago. Dr. Ralston has worked with the HHPF as a prolotherapy provider and instructor since 1995.

#### **K. Dean Reeves, MD\***

Dr. Reeves has served as either primary investigator or research designer and facilitator for studies of the clinical effects and basic science of dextrose prolotherapy and perineural injection in osteoarthritis, tendinosis and chronic widespread pain since 1994. In recent years, he has enjoyed participation in a team approach to research in cooperation with Dr. David Rabago and in support of the goals of the UW Prolotherapy Education and Research Lab.

#### **Ali Safayan, MD†**

Dr. Safayan has been in practice at Restorative Health Center for Integrative Medicine in Washington, DC, since 1990. Board certified in internal medicine (2000-2010), he has taught prolotherapy during our Madison conference as well as on HHPF trips to Honduras and Mexico. He is also a senior faculty member and the preceptor in charge of the Helms Medical Institute (HMI) which provides medical acupuncture training for both civilian and military physicians. In his practice, Dr. Safayan utilizes conventional and complementary therapies including prolotherapy, PRP, medical acupuncture, and functional and nutritional medicine.

#### **Jaehyun Shim, MD†**

Dr. Shim is a neurosurgeon in Seoul, South Korea. After learning prolotherapy from the HHPF, his medical practice in Seoul now includes prolotherapy for chronic pain. Dr. Shim is active in the HHPF, instructing physicians in Honduras, Mexico and at the annual HHPF Madison conference. Dr. Shim is also a member and faculty of the Seoul MKS Ultrasound Society.

#### **Regina Sit, MBBS(HK), FRACGP, FHKCFP, FHKAM\***

Dr. Regina Sit is the associate professor in family medicine, the Jockey Club School of Public Health and Primary Care, the Chinese University of Hong Kong. In addition to her family medicine specialist training, she also carries qualifications in pediatrics, dermatology, geriatric and internal medicine. As a family physician, she develops her special skills in pain management and is a Certified Interventional Pain Sonologist by the World Institute of Pain. Her clinical and research interests focus on the study of musculoskeletal pain in primary care. Currently, she is the director of the CUHK-Jockey Club Pain Relief Project for the Seniors, and is leading an interdisciplinary team for chronic pain management in primary care.

#### **Jon Trister, MD†**

Dr. Trister is board certified in internal medicine. In his private practice in Massachusetts, he specializes in internal medicine, skin cancer outpatient surgery, orthopedic medicine, spinal cord injury medicine, osteopathy, and functional medicine. After completing his residencies in general and orthopedic surgery in the USSR and internal medicine in the US, Dr. Trister completed a fellowship in spinal cord injury medicine at Harvard Medical School. Prior to coming to the US, Dr. Trister was a general and orthopedic surgeon in Ukraine from 1975-1989.

#### **Linh Vuong, MD†**

Dr. Vuong is board certified in family medicine with a CAQ in sports medicine and extensive training in complementary and alternative practices. She has an integrative practice with her sister, Dr. Tinh Vuong, in the Los Angeles area that offers prolotherapy, PRP, PIT, MSK ultrasound, osteopathy and acupuncture. She enjoys teaching and is an attending physician at Harbor UCLA Family Medicine & Sports Medicine Department. Dr. Vuong has been with HHPF since 2009 and has served in Honduras and Mexico.

#### **Tinh Vuong, DO†**

Dr. Vuong is board certified in family medicine, a licensed acupuncturist and herbalist, and a prolotherapist. She received her Doctor of Osteopathy (DO) degree from Touro University College of Osteopathic Medicine in Vallejo, CA, and completed her family medicine internship and residency at Harbor UCLA Medical Center.

#### **David Wang, DO\*†**

Dr. Wang is board certified in physical medicine and rehabilitation. He specializes in musculoskeletal ultrasound, osteopathic manipulation, spine, and regenerative medicine including prolotherapy and PRP. He is a founding partner and director of education and training of Regenerative Orthopedics and Sports Medicine, with offices throughout the Metropolitan DC area. Dr. Wang has been active in the HHPF for over 10 years, teaching at the Madison conference and in Honduras and Mexico.

#### **Michael Weber, MD†**

Dr. Weber received his medical degree from the University of Virginia School of Medicine, completed a residency in family medicine at the University of Wisconsin-Madison, and a fellowship in integrative medicine through the UW Academic Integrative Medicine Fellowship/ Arizona Center for Integrative Medicine Fellowship. A member of the UW faculty, he provides integrative primary care including acupuncture and prolotherapy.

#### **Chueh-Hung Wu, MD, CIPS\***

Dr. Chueh-Hung Wu is a board-certified physiatrist (specialist in physical medicine and rehabilitation) and assistant professor at National Taiwan University College of Medicine. He has published over 50 articles in SCI-indexed journals, including two original articles in Radiology. He acts as a reviewer for 17 SCI-indexed journals. He is actively involved in teaching diagnostic and interventional musculoskeletal ultrasound and has been invited as a speaker and an instructor for more than 30 international conferences and workshops. He is currently conducting studies to investigate mechanisms of hydrodissection for nerves.

#### **Annette Zaharoff, MD† (HHPF BOD)**

Dr. Zaharoff is a sports medicine physician in private practice in San Antonio, TX. Her practice, The Non-Surgical Center of Texas, is a comprehensive center for the evaluation and nonsurgical treatment of MSK injuries. Her practice includes prolotherapy, PRP, and stem cell injections and she is board certified in physical medicine and rehabilitation. She is the current president and a founding member of the International Association for Regenerative Therapy (IART) and serves on the board of directors for HHPF. She has been involved in strategic planning and educational trainings for IART and HHPF.

#### **Miguel Zárate, MD\***

Dr. M. Zárate is a certified family medicine physician and pain doctor at Hospital Italiano de Buenos Aires, Argentina. He has an AAOm certification in prolotherapy, a master's degree in Lyfotgt Perineural Injection Therapy (PIT), and MSc degree in books edition. In addition to his clinical practice and research, Dr. Zárate teaches prolotherapy and Lyfotgt PIT. He is one of the directors of the University Workshop of Myofascial Pain in the Hospital Italiano de Buenos Aires, Argentina (HIBA). He coordinates a group of family physicians who treat chronic pain in HIBA and has published chapters and edited several family medicine books.