## Advanced Clinical Immunology and Functional Medicine Inflammology

### Course title:
- Advanced Clinical Immunology and Functional Medicine Inflammology

### Course subtitle:
- The Study, Assessment, and Treatment of Inflammatory Disorders (Clinical Functional Inflammology)

### Lead Instructor:
- Dr Alex Vasquez DC ND DO FACN
  - Introduction and overview of credentials is provided below

### Co-instructors / guest lecturers:
- To be announced

### Duration:
- **Required core curriculum:** Approximately 25 hours of engagement with approved/required lecture, reading, assessments
- **Additional/optimal resources:** Approximately 25 additional hours of optional audio and video materials

### Accreditation:
- Approved coursework by International College of Human Nutrition and Functional Medicine
- Others pending: continuing education for healthcare/medical professionals

### Delivery:
- **Live/interactive sessions**
- **Lecture**
- **Written materials/diagrams in PDF and textbook formats**
- **On-line assessments**

### Modular deployment:
- **First Module—Introduction, Assessments, Foundational Concepts and Interventions**
  - Basic Immunology, Review
  - Patient Assessments and Common Laboratory Tests
  - Risk Management
  - Functional Inflammology Protocol: Applied Assessments and Clinical Interventions
- **Second Module—Clinical Functional Inflammology of Metabolic Inflammation**
  - Clinical Conditions—exemplary/representative topics:
    - Migraine
    - Fibromyalgia
    - Chronic Fatigue Syndrome
    - Hypertension
    - Diabetes Mellitus Types 1.5 and 2, Insulin Resistance, Metabolic Syndrome
  - Patient Assessments
  - Pharmacology, Integrative Pharmacology, Drug-Nutrient Interactions
  - Functional Inflammology Protocol specifically applied to Disorders of Metabolic Inflammation
- **Third Module—Clinical Functional Inflammology of Allergic Inflammation**
  - Clinical Conditions—exemplary/representative topics:
### Fourth Module—Clinical Functional Inflammology of Autoimmune Inflammation
- Clinical Conditions—exemplary/representative topics:
  - Rheumatoid Arthritis
  - Psoriasis and Psoriatic Arthritis
  - Vasculitis—various subtypes including Wegener's Granulomatosis
  - Sjogren's Disease
  - Polymyositis/Dermatomyositis
  - Also: Raynaud's Syndrome

### Fifth Module—Special Topics and Discussions
- Antiviral Protocol
- Vaccinations
- Anti-infectious Immune Support/Stimulation
- Cancer Treatment: Discussion of Nutritional Considerations

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**Required supplies:**
- Computer/smartphone with speakers and microphone, with necessary software, and with reliable high-speed internet access
- Basic student supplies such as pen/pencil/highlighter, notecards, etc.
- Required PDFs and videos will be provided within course materials; students are responsible for acquiring/reading/studying the required textbook

**Required textbook:**
- Others

**Target audience:**
- Healthcare professionals/providers participating in clinical patient care
- Medical physicians
- Researchers, administrators, policy-makers

**Learning objectives and practice gaps—general overview:**
- Clinical practice has not kept pace with the emerging scientific basis regarding the best practices for the prevention and treatment of lifestyle/environment-influenced diseases such as obesity, diabetes/metabolic syndrome, allergy/asthma/atopy, and autoimmunity. By integrating these new findings and interventions into clinical practice, physicians will be better able to deliver safer and more effective healthcare.

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**Course Description:**
- **Advanced Clinical Immunology and Functional Medicine Inflammology:** This course explores inflammation and immune dysfunction as common pathogenic mechanisms in many chronic disorders, such as diabetes mellitus, hypertension, allergy, and autoimmunity. Specifically and clearly, this course covers both the essential components of Immunology from basic science perspectives (e.g., anatomy/histology/cytology, physiology, pathology) and clinically applicable perspectives, with an emphasis on the latter to enable clinicians and researchers to understand, appreciate, and apply the translation of basic science research to the treatment of
patients with inflammatory/allergic/autoimmune conditions. Dietary, (phyto)nutritional, hormonal, microbial, xenobiotic, influences on the inflammatory process, including both pro-inflammatory and anti-inflammatory effects, are explored in depth. Case studies will include autoimmune diseases, allergies, and metabolic disorders. Risks, benefits, and nutritional interactions associated with common anti-inflammatory medications are reviewed as is basic Immunology.

**Course Goals and Objectives:**

1. Attendees will **learn** the basic functions/mechanisms/components of the immune system and how these are influenced by the manifold "environmental factors" such as diet, lifestyle, and chronic infections as well as by endogenous factors such as detoxification defects and hormonal imbalances.
2. Attendees will **understand** fundamental principles of immunology and how these are relevant to and influenced by nutrition and the functional medicine clinical approach.
3. Attendees will **be able to apply** concepts taught throughout this course (and any other/related courses) to the prevention and treatment of inflammatory disorders.
4. Attendees will be able to **demonstrate proficiency** in patient assessment and advanced nutritional and pharmacologic interventions.

**Methods of assessment, criteria for successful completion/passing:**

- **Participation in live discussions:** Students/attendees must attend or view the live sessions; these will be held in an online via live interactive format. Student/attendees will be able to attend and interact during the live session and/or must view the session which will be recorded and made available via our video-hosting platform.
- **Quizzes and examinations:** These will be administered online. Students must score ≥80% in order to pass each assessment; one retake per quiz is permitted. Unsatisfactory performance requires conference with the instructor and additional work therefore students should endeavor to meet performance requirements on the first attempt.
- **Grading, criteria for successful completion:** This course is graded on a pass/fail basis based on minimum 80% competency on objective assessments. If core competencies are assigned, these must be passed with 95% proficiency.
- **Schedule:** Enrollment is on an ongoing basis within the timeframe specified for accreditation; course assignments should be completed within 4 months of the start date.

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**Instructor’s Brief Biographical Sketch**

♦ **Alex Vasquez DC ND DO FACN,** Director of Programs for the International College of Human Nutrition and Functional Medicine: The founding Program Director of the world’s first fully-accredited university-based graduate program in Human Nutrition and Functional Medicine, Dr Alex Vasquez holds three doctoral degrees as a graduate of University of Western States (Doctor of Chiropractic, 1996), Bastyr University (Doctor of Naturopathic Medicine, 1999), and University of North Texas Health Science Center, Texas College of Osteopathic Medicine (Doctor of Osteopathic Medicine, 2010). Dr Vasquez is the author of many textbooks, including Integrative Orthopedics (2004-2012), Integrative Rheumatology (2006-2013), Musculoskeletal Pain: Expanded Clinical Strategies (published by the Institute for Functional Medicine, 2008), Chiropractic and Naturopathic Mastery of Common Clinical Disorders (2009), Integrative Medicine and Functional Medicine for Chronic Hypertension (2011), Migraine Headaches, Hypothyroidism, and Fibromyalgia (2012), Fibromyalgia in a Nutshell (2012), and Selected Topics in Neuromusculoskeletal Medicine (2013). "DrV" has also written approximately 100 letters and articles for professional magazines and medical journals such as TheLancet.com, British Medical Journal (BMJ), Annals of Pharmacotherapy, Nutritional Perspectives, Journal of Manipulative and Physiological Therapeutics (JMPT), Journal of the American Medical Association (JAMA), Original Internist, Integrative Medicine, Holistic Primary Care, Alternative Therapies in Health and Medicine, Journal of the American Osteopathic Association (JAOA), Dynamic Chiropractic, Journal of Clinical Endocrinology and Metabolism, and Arthritis & Rheumatism, the Official Journal of the American College of Rheumatology. Dr Vasquez lectures nationally and internationally to healthcare professionals and practices in Oregon as a naturopathic physician. Dr Vasquez is the Founding Editor of International Journal of Human Nutrition and Functional Medicine (IntHumNutrFunctMed.org) and the Conference Director for The International Conference on Human Nutrition and Functional Medicine (ICHNFM.org).
♦ **Educational Background**

♦ **Doctor of Osteopathic Medicine (May 2010)**
  University of North Texas Health Science Center, Texas College of Osteopathic Medicine
  [hsc.unt.edu/education/tcom](http://hsc.unt.edu/education/tcom) Ft Worth, TX

♦ **Doctor of Naturopathic Medicine (September 1999)**
  Bastyr University [bastyr.edu](http://bastyr.edu) Seattle, Washington

♦ **Doctor of Chiropractic (March 1996)**
  University of Western States [uws.edu](http://uws.edu) Portland, Oregon

♦ **Bachelor of Science, Human Biology**
  University of Western States Portland, Oregon

♦ **Professional Affiliations, Positions, Accomplishments**

♦ 2013-present, **Director, International College of Human Nutrition and Functional Medicine** [ICHNFM.org](http://ICHNFM.org)
  *Founded in 2013, our “International College” is an organization of health science professionals, researchers, and clinicians who work together to deliver academic/scientific/intellectual excellence in a manner that prioritizes passionate delivery and intellectual freedom—what we refer to as “unfiltered excellence” to our audiences of physicians, students, journal readers, and other professional groups.*

♦ 2013, **Conference Director, International Conference on Human Nutrition and Functional Medicine**
  *Hosted, orchestrated, and handled all logistics and infrastructure for event that served more than 400 attendees and 16 world-class presenters over the course of 5 days at the Oregon Convention Center in Portland, Oregon, USA. Details available on-line: [http://www.ichnfm.org/events/2013_Portland/](http://www.ichnfm.org/events/2013_Portland/)*

Professional Affiliations, Positions, Accomplishments—continued

♦ 2011-2012, Adjunct Professor (Pharmacology), University of Western States, Portland Oregon uws.edu
♦ 2008-2013, Adjunct Professor (Advanced Laboratory Medicine), National University of Health Sciences, Lombard Illinois nuhs.edu
♦ 2006-2013, Member, American Osteopathic Association osteopathic.org
♦ 2004-present, Consultant Researcher and Lecturer, Biotics Research Corporation BioticsResearch.com
♦ 2009, US National Institutes of Health (NIH) Predoctoral Research Fellow, University of North Texas Health Science Center, Supervisor: Peggy Smith-Barbaro PhD; Mentor: Scott Stoll DO PhD
♦ Certified (June 2010 - June 2012) in "Advanced Life Support in Obstetrics ("ALSO")"
♦ Certified (June 2010 - June 2012) in "Pediatric Advanced Life Support ("PALS")"
♦ Certified (June 2010 - June 2012) in "Neonatal Resuscitation Protocol ("NRP")"
♦ Certified (June 2008 - December 2012) in “Advanced Disaster Life Support” by the American Medical Association and the National Disaster Life Support Foundation
♦ Certified (June 2008 - December 2012) in “Basic Disaster Life Support” by the American Medical Association and the National Disaster Life Support Foundation
♦ 2006-2007, Editor, Naturopathy Digest naturopathydigest.com
♦ 2006-2007, Columnist, Nutritional Wellness nutritionalwellness.com
♦ 2004, Member of the Core CAM Curriculum Committee at University of Texas Medical School in Galveston utmb.edu
♦ 2000-2001, Adjunct Professor (Orthopedics, Radiographic Interpretation 1, and Rheumatology) Bastyr University Bastyr.edu
♦ 2005, Biology Faculty, Associate Professor of Nutrition, Houston Community College
♦ 2002-2003, Consultant and Healthcare Provider, HBU Wellness Center for the Memorial Hermann Healthcare System MemorialHermann.org
♦ 1998-2004, Member, American Association of Naturopathic Physicians naturopathic.org
♦ 1997, Worked with The Iron Overload Diseases Association to encourage Washington State Governor Gary Locke to proclaim September 21-27, 1997 as Iron Overload Diseases Awareness Week, signed by governor
♦ 1992-1996, Member, American Chiropractic Association, and ACA Council on Nutrition
♦ 1994, Review Staff for The Journal of Naturopathic Medicine
Sample publications by Dr Alex Vasquez

1. Vasquez A. Mitochondrial dysfunction and the emerging mitochondrial medicine. *Integrative Medicine* 2013 August
5. Calcium and vitamin D in preventing fractures: data are not sufficient to show inefficacy. [letter] *BMJ* 2005
6. Web-like Interconnections of Physiological Factors. *Integrative Medicine* 2006, April/May
7. Subphysiologic Doses of Vitamin D are Subtherapeutic: Comment on the Study by The Record Trial Group. *The Lancet* Published online May 6, 2005
8. Subphysiologic Doses of Vitamin D are Subtherapeutic: Comment on the Study by Porthouse and colleagues. [rapid response] *BMJ*: 2005, May 4
18. Better Bones and Beyond: Vitamin D Plays Role in Inflammatory/Metabolic Disease. *Holistic Primary Care* 2004
Major Textbooks Authored by Dr. Alex Vasquez

1. Integrative Orthopedics (‘04,’07,’12)
2. Integrative Rheumatology (‘06,’07) revision and expansion: Integrative Rheumatology, Nutritional Immunology, Functional Inflammology (Third Edition, ‘13pending)
4. Chiropractic and Naturopathic Mastery of Common Clinical Disorders (‘09)
5. Integrative Medicine and Functional Medicine for Chronic Hypertension (‘10), Integrative Chiropractic Management of High Blood Pressure & Chronic Hypertension (‘10,’11)
6. Migraine Headaches, Hypothyroidism, and Fibromyalgia (‘12)
7. Fibromyalgia in a Nutshell (‘12)
8. Foundational Assessments and Wellness Promotion in Integrative Chiropractic and Functional Medicine (‘12)
9. Functional Immunology and Nutritional Immunomodulation (‘12), Functional Inflammology (‘13)
10. Dr Vasquez’s Presentation on Migraine Headaches, Fibromyalgia, and Chronic Fatigue Syndrome (‘13)
11. Functional Inflammology, Allergy, Asthma, and Dysbiosis (‘13)
12. Selected Topics in NeuroMusculoSkeletal Medicine (‘13)

Dr Vasquez has established an international readership and following based on his many books and scientific publications; with more than 100 publications in professional magazines and scientific journals, Dr Vasquez has international name-recognition, which is further reinforced by his national and international lecture schedule. Further, Dr Vasquez also recently founded “International Journal of Human Nutrition and Functional Medicine” (www.IntJHumNutrFunctMed.Org) to serve as a platform for students, faculty, and other clinicians and researchers to rapidly and broadly publish their works at no cost to themselves or their institutions; this allows additional and free dissemination of expertise, and influence on a dynamic and international basis via peer-reviewed publications that serve to advance clinical medicine, patient care, and the nutritional and biologic sciences.
**Major Textbooks—continued**

**A Functional Medicine Monograph**

**MUSCULOSKELETAL PAIN:** Expanded Clinical Strategies

Alex Vasquez, DC, ND

**INTERNATIONAL JOURNAL OF HUMAN NUTRITION AND FUNCTIONAL MEDICINE.**

International College of Human Nutrition and Functional Medicine • ICHNFM.ORG • 2013 March, v.11, n.1

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<thead>
<tr>
<th>Publication(s) and author(s) in this issue:</th>
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<tbody>
<tr>
<td>Title: Initial Considerations in Patient Assessment and Management: An Overview of Key Concepts in History, Examination, Laboratory Interpretation, and Risk Assessment.</td>
</tr>
<tr>
<td>Author: Alex Vasquez, D.C., N.D., O.C.N.</td>
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<tr>
<td>Article type: Clinical review and monograph</td>
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<td>Number of pages: 146 pages plus index; 158 total pages</td>
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<td>Language(s): English</td>
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**SELECTED TOPICS IN NEUROMUSCULOSKELETAL MEDICINE:**

Text Chapters and Presentation Slides on Clinical Concepts, Patient Assessments, Laboratory Interpretation, Carpal Tunnel Syndrome, Migraine Headaches, Fibromyalgia, Chronic Fatigue Syndrome, and Back Pain

**THE INSTITUTE FOR FUNCTIONAL MEDICINE**
Major Textbooks—continued

ICHNF 2013: Conference Presentation Slides from Dr Alex Vasquez
Accompanying videos are available online: www.VIMEO.com/ICHNFFM

2013 INTERNATIONAL CONFERENCE on HUMAN NUTRITION and FUNCTIONAL MEDICINE
PORTLAND OREGON CONVENTION CENTER • SEPTEMBER 25-29, 2013

Dr. Alex Vasquez DC ND DO FACN
NutritionAndFunctionalMedicine.org • ICHNFM.org

April 2013: Dr Vasquez’s
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Sections in this Edition:
1. Assessments and Concepts—146 pages of text, diagrams
2. Allergies and Asthma—39 pages of text, diagrams
3. Updated Clinical Protocol—195 presentation slides
4. Allergy—56 presentation slides
5. Dysbiosis—131 presentation slides

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OptimalHealthResearch.com

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**Book Chapters and Peer-Reviewed Articles**

- **Vasquez A.** Musculoskeletal Pain: Expanded Clinical Strategies: Printed monograph approved for ACCME PRA-1 Continuing Medical Education Published by Institute for Functional Medicine 2008 May
- **Vasquez A.** Interventions Need to Be Consistent with Osteopathic Philosophy. *JAOA: Journal of the American Osteopathic Association* 2006 Sep
- **Vasquez A.** Web-like Interconnections of Physiological Factors. *Integrative Medicine: A Clinician’s Journal* 2006 Apr/May
- **Vasquez A.** Reducing pain and inflammation naturally - Part 6: Nutritional and Botanical Treatments Against “Silent Infections” and Gastrointestinal Dysbiosis, Commonly Overlooked Causes of Neuromusculoskeletal Inflammation and Chronic Health Problems. *Nutritional Perspectives* 2006 Jan
- **Vasquez A, Muanza DN.** Accolades and Addenda for "Use of Botanicals in Osteoarthritis and Rheumatoid Arthritis": Comment on Article by Ahmed et al. *Evidence-Based Complementary and Alternative Medicine* 2005 Dec 15
Vasquez A, Cannell J. Calcium and vitamin D in preventing fractures: data are not sufficient to show inefficacy.[letter] *BMJ: British Medical Journal* 2005 May

Vasquez A. Reducing pain and inflammation naturally - Part 4: Nutritional and Botanical Inhibition of NFkappaB, the Major Intracellular Amplifier of the Inflammatory Cascade. A Practical Clinical Strategy Exemplifying Anti-Inflammatory Nutrigenomics. *Nutritional Perspectives* 2005 July

Vasquez A. Subphysiologic Doses of Vitamin D are Subtherapeutic: Comment on the Study by The Record Trial Group. *TheLancet.com* 2005 May online


Vasquez A. High body iron stores: causes, effects, diagnosis, and treatment. *Nutritional Perspectives* 1994
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The Study, Assessment, and Treatment of Inflammatory Disorders (Clinical Functional Inflammology)

Everything You Ever Wanted to Know or Ask…and Beyond

Lead Instructor Dr Alex Vasquez DC ND DO FACN

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