



**COLLEGE OF
INTEGRATIVE MEDICINE**

**Join Us Live in Houston, Texas!
February 18-19, 2017**

**Integrative & Functional Medicine Approach to
Blood Chemistry Interpretation**



Dr. Wayne Sodano
DC, DABCI, DACBN, CFMP, BCTN
Director of Medical Education

*What Integrative Medicine Clinicians Need to Know About Basic
& Advanced Laboratory Diagnostic Testing*

Determine the most appropriate laboratory diagnostic tests for your patient, interpret laboratory results in a clinically relevant and streamlined manner, including advanced cardiovascular testing, anemia and thyroid profiles, and determine the integrative and functional medicine interpretation of body system disease and dysfunction blood chemistry result patterns. Attendees can (pre)submit lab reports for interpretation workshop.



Dr. Milton Bastidas, DC
International Ambassador
of Continuing Education

Syllabus & Registration Form Below

Sterling Country Club/Houston National Golf Club
16500 Houston National Blvd
Houston, TX 77095

February 18, 2017 9:00 a.m. - 6:00 p.m.

(Light Breakfast and 1 hr lunch-provided)

February 19, 2017 9:00 a.m. - 4:00 p.m.

(Light Breakfast provided)

Free Parking

Arrive early and Golf!



DC: 12 CEU hours applied
for through National University
of Health Sciences

\$395 Before February 1, 2017
\$495 After Feb 1, 2017 or at the door*
*(*At door admission based on availability)*

Register Early! Seating is limited!
877-841-7241



ACBN approved
continuing ed provider

Live Course Title

Integrative and Functional Medicine Approach to Blood Chemistry Interpretation:

What Integrative Medicine Clinicians Need to Know About Basic and Advanced Laboratory Diagnostic Testing

Instructor(s): Wayne L. Sodano, DC, DABCI, DACBN, CFMP, CIHP, BCTN
Milton Bastidas, DC
Date(s): February 18-19, 2017
Location: Houston National Golf Club
16500 Houston National Blvd
Houston, TX 77095
(281) 304-1400
Email: info@IntegrativeMedHealth.com
Phone: (877) 841 7241
Duration: 12 hours (11 hours classroom; 1 hour workshop)

Seminar Goal

The goal of the seminar is to increase the integrative medicine clinician's laboratory diagnostic skills, which will assist in prescribing the most effective therapeutic interventions.

Seminar Objectives:

- Review the rationale for ordering diagnostics test
- Discuss the method of ordering the most appropriate diagnostic basic and advanced blood tests
- Discuss the method of determining reference range and optimal range
- Discuss the most common sources of pre-analytical variability
- Discuss the factors that affect laboratory testing (FALT)
- Attendees will learn to analysis the anemia and thyroid profiles.

Student Learning Outcomes

At the completion of this seminar students will be able to:

- Order the most appropriate laboratory diagnostic tests for their patient's presenting signs and symptoms, and positive examination findings
- Interpret laboratory tests in a clinically relevant and streamlined manner
- Demonstrate skills of interpreting advanced cardiovascular testing, anemia profile, and thyroid profile
- Determine the integrative and functional medicine interpretation of body system disease and dysfunction blood chemistry result patterns

Curriculum

Saturday 2/18/2016 (8 hours) 9:00 am to 6:00 pm (1 hr lunch)

Part I: Introduction to Clinical Laboratory Medicine

- Rationale for obtaining laboratory blood studies
- The reference range problem and biologic variations
- Optimal reference range
- The most common sources of pre-analytical variability
- Biological rhythms (circadian, ultradian and infradian rhythms)
- Laboratory terminology
- Laboratory assay, instrumentation and technology

Part II: Hematology

- Blood composition and life span of blood cells
- Hemoglobin synthesis (nutrients required – review of vitamins B5, B6, B12 and C, folic acid iron and amino acids)
- The Complete Blood Count (RBC, hemoglobin, hematocrit, RBC indices, reticulocyte count and RPI, peripheral blood smear (cell morphology), WBC count and differential, platelet count and MPV, coagulation tests)

Part III: Clinical Laboratory Medicine: Liver, Gallbladder and Pancreas

- Serum Proteins
- Globulin subfractions
- Serum Protein Electrophoresis
- Patterns of acute-reactant proteins on SPE
- Total Protein, Albumin, Globulin and A/G ratio
- Interpretation of liver enzymes (ALP, GGT, 5'-nucleotidase, Bilirubin, AST and ALT)
- Interpreting isolated abnormalities of liver enzymes
- Pancreatic enzymes assessment: serum amylase and serum lipase
- Assessment of Lactic Dehydrogenase and LDH isoenzymes

Part IV: Renal Function Testing

- Cystatin, Serum Creatine, Blood Urea Nitrogen, Creatinine Clearance, eGFR
- Urinalysis: specimen, macroscopic analysis, microscopic analysis, biochemical analysis (semiquantitative)
- Proteinuria
- Hematuria
- Urinary pH testing

Part V: Clinical Laboratory Medicine: Electrolytes, Minerals and Acid-Base

- Serum Electrolytes and Anion Gap
- Serum calcium, phosphorous, and magnesium (RBC magnesium)
- Adjusting serum calcium in patients with hypoalbuminemia
- Acid-Base and Acid-Base Disorders

Part VI: Clinical Laboratory Medicine: Infectious Disease, Rheumatic Diseases and Serum Uric Acid

- Review of infectious diseases (bacterial, mycobacteria, viruses, parasites, fungi)
- Body sites with normal colonization of bacterial flora
- Common pathogens by site of infection
- Overview of parasitic infections (signs and symptoms, common parasites and treatment strategies)
- Systemic Rheumatic Diseases and related disorders
- Laboratory Assessment testing for rheumatic diseases
- Serum Uric Acid interpretation

Part VII: Clinical Laboratory Medicine: Tumor Markers

- Three main categories of tumor markers
- Tumor markers and elevation in enzymes that may indicate an active tumor process
- Serum tumor markers in clinical practice

Part VII: Clinical Laboratory Medicine: Integrative and Functional Medicine Assessment of Laboratory Patterns of Associated with Certain Conditions

- The clinical work of one of the pioneers of functional blood chemistry interpretation will be discussed as to relates to specific laboratory results patterns associated with disease and dysfunction

Part IX: Clinical Laboratory Medicine Approach to Anemia

- Laboratory tests used to diagnose anemia
- Conditions associated with reduced erythropoietin response
- Adjusting hemoglobin value to altitude and smokers
- State of Anemia: hypoproliferative, maturation disorders, and hemorrhage/hemolysis
- Causes of bone marrow-damage anemias
- Drugs associated with marrow damage
- Thalassemias and hemoglobinopathies
- Erythropoietic profile of thalassemia and hemoglobinopathy
- Small volume-chronic blood loss anemia and hemolytic anemia
- Overview of hemolytic anemias
- Hemolytic anemia algorithm
- Chronic hemolytic anemia erythropoietic profile
- Microcytic anemia
- Iron deficiency anemia
- Iron Panel Interpretation
- Iron deficiency and inflammation
- Anemia Profile Algorithms

Part X: Clinical Laboratory Medicine: Cardiovascular Assessment

- Pathophysiology of Cardiovascular Disease: Atherosclerosis
- Endothelium Function in Sickness and in Health
- Arginine-Nitric Oxide Metabolism
- Lipoproteins
- Lipoproteins and Cardiovascular Risk
- Lipid panel, lipoprotein sub-fractions, Lp(a), and apolipoproteins,
- High-sensitivity CRP
- Lp-phospholipase A₂ (Lp-PLA₂)
- Fibrinogen
- Homocysteine

Part X: Clinical Laboratory Medicine: Cardiovascular Assessment (continued)

- Vitamin D
- Insulin resistance markers
- Insulin
- Heart failure/stress markers (NT-proBNP and soluble ST2)
- Omega-3 and omega-6 ratio
- Genetic testing

Part XI: Clinical Laboratory Medicine: Interpretation of the Thyroid Panel

- Agents Inhibiting Thyroid Hormone Synthesis and Secretion
- Compounds that Affect Thyroid Hormone Transport Proteins in Serum
- Agents that Alter the Extra-thyroid Metabolism of Thyroid Hormone
- Agents that May Affect TSH Secretion
- The Thyroid Gland and Oxidative Stress
- Iron and Thyroid Metabolism
- The Thyroid and Selenium, Iodine and Zinc: A Brief Review
- Urinary Iodine Results
- Laboratory Diagnosis of Thyroid Disorders
- General Interpretation of Thyroid Function Tests
- General Interpretation of Thyroid Function Test: A Second Look
- Conditions in Which There May be an Altered FT₄-to-FT₃ Ratio
- Integrative Medicine Thyroid Scale for Interpreting Thyroid Function Tests
- Thyroid Scale Interpretation Matrix

Part XII: Clinical Laboratory Medicine Workshop

- Clinicians will be presented with a series of laboratory tests for their review and interpretation.
- Clinicians can submit blood test results for class review

Materials: PowerPoint presentation and individual manuals of corresponding notes/slides/handouts/blood tracking form for interpretation.



Registration Form

Live Lecture

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Houston, Texas**

Name & Credentials: _____

License Number(s) & State(s) Licensed: _____

Billing Address: _____

Phone: _____ **Email:** _____

Credit Card Type & Number: _____ **Exp:** _____ **CVV:** _____

Signature: _____ **Date:** _____

Please complete this form in its entirety and return to:

The College of Integrative Medicine via email @ info@CollegeofIntegrativeMedicine.org
or fax @ 443-327-4763.

If you prefer to register by phone: 877-841-7241

Thank you!

