

11:45 – 12:45 **Dr. Parpia** **Preventing the “Failed Patient” – A Discussion of the Cell-Danger Response.**

The patient who will fail simple antibiotic therapy typically has the tendency to express these four issues:

- Mast Cell Activation
- Ligamentous laxity
- Problems of detoxification
- Inappropriate T-Cell modulation

- The Cell Danger Response
 - Inflammation is the body’s normal response to danger (pathogens, environmental toxicants)
 - The body’s inflammatory response is meant to be transient-when that response is ongoing and especially when the inciting event persists the normal tamping down of inflammation doesn’t occur
 - When inflammation persists and the Healing Cycle is not completed the clinical presentation is an outcome of their genetic tendencies

12:45 – 1:15 **Tom Fabian, Ph.D., CNT** Medical Presentation – Non-CME
Diagnostic Solutions Laboratories

The Role of Advanced GI Assessment in Optimizing Gut & Immune Health

Advanced gastrointestinal assessment with comprehensive stool testing provides clinicians with critical insights into gastrointestinal infections, dysbiosis, and physiological imbalances that can contribute to immune dysfunction in patients with chronic infections. By identifying specific factors, such as pathogens, dysbiosis patterns, digestive deficiencies, intestinal barrier dysfunction, and altered immune responses, clinicians can support patients with highly targeted approaches for improving immune function.

1:15 – 2:30

Lunch

SATURDAY

MORNING THEME: IMMUNE DISRUPTION AND STRATEGIES TO MANAGE IT

8:30 – 9:30 **Dr. Moorcroft** **Bartonella and Other Coinfections**

Tick-borne co-infections are becoming increasingly appreciated as causes of human disease and morbidity. Once thought to be relatively rare, researchers are now finding that co-infection of ticks, such as *Ixodes scapularis*, occurs “*more frequently than expected, resulting in enhanced human exposure to multiple infections that can cause more severe symptoms and sometimes make diagnosis more difficult*” [Dunn 2014]. This knowledge has helped clinicians better define the often-complex presentation of patients with persistent tick-borne disease and opened new pathways for effective treatment and management of these patients.

Along with this greater understanding of the frequency of tick co-infection, other researchers have also looked for more effective treatment approaches for persistent co-infections. In the past 2 years there have been research breakthroughs in the utilization of both pharmacologic and botanical anti-microbials that have led to significant improvements in patient outcomes, decreased patient suffering and decreased burden of illness to society.

9:30 – 10:30 **Dr. Gedroic** **Parasites, Immune Regulation and MCAS**

The rise of Mast Cell Activation Syndromes parallels the chronic imbalances we are witnessing in the microbiome today. Mast cells and the inflammatory mediators of the Th2 arm of the immune system are often recruited to downregulate a chronically dysregulated mycobiome or to defend against parasitic infestation by a biome that has compromised defenses. The specific elements of the immune system that is recruited to defend against parasites is not as well understood and involves key players that stimulate fibrosis and the “weep and sweep” phenomena. Understanding this critical immunology is essential to understanding the “root cause” of MCAS and the rising tide of mast cell disorders.

10:30 – 11:15

Break

11:15 – 12:00 **Dr. Ingels** **Allergic Phenomenon in the Chronically Ill Patient**

Allergies affect more than 25 million Americans each year and represent immune intolerance to environmental exposures to foods, mold, pollen, animal danders and other chemicals. Loss of immune tolerance is an important mechanism in the development of allergies and autoimmune disease and suggests an imbalance of Th1/Th2 pathways. The number of people with allergies grows each year and

may attributed to changes in climate, sterilization of food and our environment or alteration in our genetic expression of certain genes.

Persistent allergy symptoms can lead to further illness such as chronic bronchitis, otitis media, sinusitis, gastroenteritis and other chronic infections. It is important for the clinician to recognize allergic illness as a precursor to other more serious illnesses, so early intervention can be employed to mitigate the risk of further disease.

12:00 – 12:45 **Dr. Ingels** **Immunotherapies in Chronic Infectious Illness**

Research shows that many infectious agents can trigger autoimmune disease through molecular mimicry. The immune system reaction to fighting infection can cross react with human cells and tissue, leading to multiple symptoms including joint pain, myalgia, encephalitis, gastroenteritis and more. Such agents as streptococcus, EBV, Borrelia burgdorferi, HHV-6, Klebsiella pneumoniae, Proteus mirabilis and others are well-documented to be a cause of autoimmune disease.

Many diagnoses such as multiple sclerosis or fibromyalgia do not have known underlying causes and are often treated symptomatically with little to no understanding of what led to the pathology. The clinician should investigate whether some of these infectious agents are underlying one's illness so that proper targeted therapy can be implemented to control symptoms and get at the root cause of their illness.

12:45 – 1:15 **Kent Holtorf, M.D.** Medical Presentation – Non-CME

Peptide Therapy for Chronic Tick-Borne Illness, CFS, MCAS, CIRS and other Multisystem Illnesses

Integrative Peptides

What the audience can expect to learn: *Modulatory peptide therapy that addresses the abnormal TH1/Treg-TH2/Th17 immune shift and subsequent vicious cycles of dysfunction, which are hallmarks of these illnesses, is an essential strategy for successful long-term treatment. Failure to address this immune dysfunction is a common cause of treatment failure. While treating these multisystem diseases can be daunting, directed therapy that restores the common underlying immune dysfunction will provide you with the ability to successfully treat these complex patients.*

1:15 – 2:30

Lunch

AFTERNOON THEME: WHEN CHRONIC INFECTION AFFECTS PEDIATRICS

2:30 – 3:15 **Dr. Ingels** **Childhood Infections**

More than 50% of all children in the United States are living with a chronic illness, many of which are some type of persistent infection. Chronic bronchitis, otitis media, strep throat, gastroenteritis, impetigo, sinusitis, urinary tract infections and PANS are commonly seen in clinical practice. The clinician should be aware of the most efficient way to identify and treat these infections to minimize morbidity in the pediatric population.

Many of these infections are preventable, so the clinician should be able to help educate parents on strategies to reduce these infections which will lead to better quality of life for children and reduced healthcare costs.

3:15 – 4:15 **Dr. Moorcroft** **PANS / PANDAS**

Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS/PANDAS) is a common the cause of acute behavior changes, including OCD, tics, regression and restricted eating, in children though many are unfamiliar with it and those who have heard of it are often suspicious. Practicing clinicians, school team members and parents need to be aware of this condition as it is a common and treatable cause of childhood morbidity.

Many pathogens that children are commonly exposed to can trigger PANS/PANDAS, including streptococcus, *Borrelia burgdorferi*, *Bartonella* species, and many viral illnesses. Understanding the potential triggers and autoimmune component of this condition allows clinicians to create appropriate treatment protocols and prevent relapses. It is critical to understand most cases of Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS/PANDAS) require a three-pronged treatment approach – antimicrobial treatment, immunomodulatory treatment, psychotherapeutic treatment.

4:15 – 4:45 **Paul Harch, M.D.** Medical Presentation – Non-CME

Hyperbaric Oxygen Therapy in the Treatment of COVID-19 infection and Long-Haulers' Syndrome

Summit to Sea Presented by New Leaf Hyperbarics

HISTORY BEARS REMEMBERING!. In January and February of 2020 internal discussions between Harch Hyperbarics principals regarding possible treatment for COVID-19 infection prompted the memory of hyperbaric oxygen therapy's debut in the U.S. during the Spanish Flu Pandemic of 1918. In 1918 Dr. Ovrall Cunningham treated a dying Spanish Flu patient in his newly constructed hyperbaric chamber

before any of his planned animal experiments could be performed. The patient lived, a string of similar patients followed, and hyperbaric medicine was launched in the U.S.

In this lecture Dr. Harch will present the similarities between Spanish Flu and COVID-19, the rationale for treatment of both with hyperbaric therapy, the experience worldwide with HBBOT in COVID-19, and the first successful case of COVID-19 Long-Haulers' Syndrome treated with HBOT.

4:45 – 5:30

Break

5:30 – 6:00 **Clinical Panel** – “Immune Disruption, Allergy and Pediatrics”

SUNDAY

MORNING THEME: RELIEVING TOXICITY THROUGHOUT THE CASE

8:30 – 9:30 **Dr. Parpia** **Detoxification Before and After Therapy**

- People who become chronically ill have a high toxic load such as:
 - Lyme and co-infection neurotoxins and biotoxins
 - Mycotoxins
 - Heavy metals
 - High EMR exposure or high sensitivity to it
 - High heavy metal burden
 - Environmental toxin burden such as high perchlorate, PCBs, glyphosate and other chemicals
- Detoxification SNPs are higher in Lyme group
- If there are SNPs in the genes of detoxifications, toxins may remain in the body, and create an environment that is not as healthy as one where the toxins are removed
 - CYP Genes
 - SOD and GST Genes
 - PON 1 Gene

9:30 – 10:30 **Dr. Moorcroft** **The Glymphatic System and Brain Detoxification**

The glymphatic system is a recently defined brain-wide paravascular pathway for cerebrospinal fluid (CSF) and interstitial fluid (ISF) exchange that facilitates promotes clearance of extracellular proteins and excess fluid from the interstitium which serves a similar function to the peripheral lymphatic system. Age and trauma related changes in the function of this system, specifically aquaporin-4 channels can lead to significant disruption of extracellular and intracellular solute clearance, leading to accumulation of extra- and intra-cellular protein aggregates such as amyloid β and tau.

This system is primarily active during sleep, specifically N3 deep sleep and during wakefulness. Glymphatic clearance has been documented to be decreased by up to 90%. Research has shown that non-optimal sleep can lead to a decrease in overall glymphatic clearance and optimal sleep as well as wakeful, very low stress states, such as during meditation can improve glymphatic clearance. This knowledge of how sleep impacts this system as well as many common disease processes negatively impact sleep can go a long way for the practicing clinicians seeking to help their patients maintain their cognitive faculties and minimize the impacts of aging on the brain.

10:30 – 11:15

Break

11:15 – 1:15 **Dr. Anderson** **Specific Medical Detoxification Strategies**

In this presentation Dr. Anderson will discuss specific medical detoxification strategies for helping patients lower their body burden of metal and chemical toxicants. Appropriate and legally defensible testing for metal toxicants, screening for chemical toxicants and other related testing will be discussed. Oral chelation therapies and safety issues as well as detoxification and support for chemical toxicants will be highlighted. Eliminatory support such as emunctory therapies will also be covered.

1:15 – 2:15

Lunch

AFTERNOON THEME: STAYING ENGAGED AND POSITIVE – PATIENT AND PHYSICIAN

2:15 – 3:15 **Dr. Moorcroft** **The Healing Mindset**

The impact of one's mindset of health and healing is of utmost importance to outcomes, though poorly understood. Most clinicians are familiar with the placebo effect, but do not harness its power in clinical practice. Many overviews report on the placebo as physiological changes associated with positive expectations of both inactive and active medical treatments; when in reality, the placebo effect can and does have the potential to create negative outcomes as well.

Growth mindsets have been associated with improved performance. Mindfulness practices have been associated with improved outcomes in psychiatric illnesses, hypertension and cognitive dysfunction, to name a few. Knowledge of the potency of one's health mindset and tools for use in clinical practice are critical for practicing clinicians seeking to optimize their patients response to treatments and overall health.

3:15 – 4:15 **Dr. Anderson** **Managing the Chronically Ill Patient (and their Doctor...)**

In this presentation Dr. Anderson will delve into one of the most subverting factors in the care of the chronically ill patient: Burnout and other issues affecting both patient and physician. He will call upon his extensive experience in managing chronically ill patients as well as broad experience mentoring

other physicians in this area. Appropriate setting of expectations and boundaries as well as managing time, clinical information and your own mental health will be discussed.

4:15 – 4:30

Brief Comfort Break

4:30 – 5:00

Clinical Panel – “Toxicity and Mental Health in Chronic Infectious Illness”

5:00

Adjourn