

THE INTENSIVE CLINICAL COURSE

MEMBRANE MEDICINE

Membrane Medicine Biomedical Conference **Stabilizing The Microbiome & Cellular Function**

CLINICAL

JUNE 11, 2015

Biomedical Lipid
Colonic Therapy

Membrane Stabilizing
Keto Therapy for
Seizure Disorders

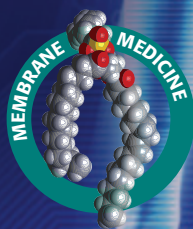
Las Vegas, Nevada

ACADEMIC

JUNE 12-14, 2015

Biomedical PhosphoLipid
Application for
Neurometabolic,
Mitochondrial Disturbance,
Clearance of Biofilm and
Epigenetic Insult

Las Vegas, Nevada



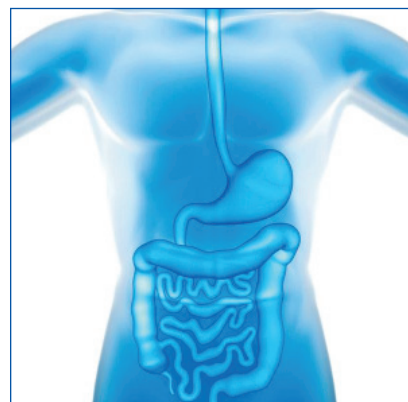
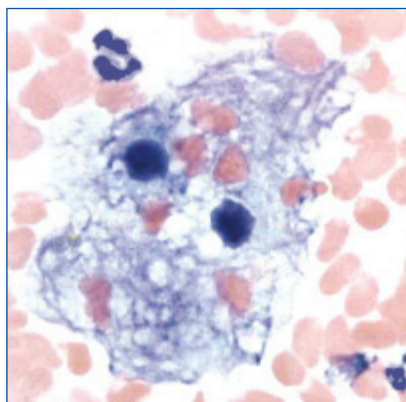
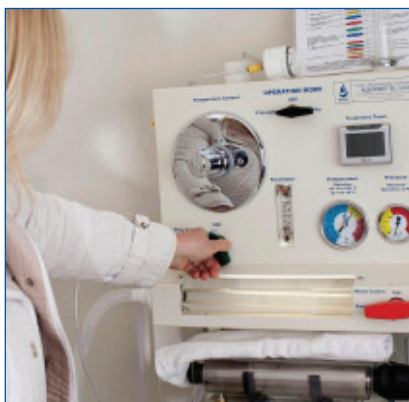
NEUROLIPID
RESEARCH
FOUNDATION

Clinical Courses June 11, 2015

MEMBRANE MEDICINE CLINICAL DAY- MICROBIOME BIOMEDICAL COLONIC – THURSDAY, JUNE 11TH

Full day session with Virginia Marston, RN, ND on stabilizing the microbiome including the medical lipid colonic procedure. This is a rare opportunity for professionals to both experience and learn how to optimize the microbiome by biohacking biofilm and resetting 'Second Brain' function.

9:30 am	10:00 am	Registration
10:00 am	12:00 pm	Clinical Model of Membrane Medicine – Virginia Marston, RN, ND
12:00 pm	1:00 pm	Microbiome:Fecal Microbiota Transplantation – Glenn Taylor
1:00 pm	1:30 pm	Membrane Stabilizing Lunch
1:30 pm	4:00 pm	Clinical Biomedical Lipid Colonic Therapy – Virginia Marston, RN, ND



MEMBRANE STABILIZING KETO THERAPY FOR SEIZURES – THURSDAY, JUNE 11TH

Full day session with Patricia Kane, PhD, Carolyn Matzinger, MD and Carrie Loughran, RD on the application of the Membrane Stabilizing Therapy for seizure disorders including super-refractory status epilepticus. Course is open to registered dietitians and licensed medical professionals.

9:00 am	9:30 am	Registration
9:30 am	10:00 am	Introduction to Membrane Stabilizing Keto Therapy – Carolyn Matzinger, MD
10:00 am	11:30 am	Membrane Stabilizing Ketogenic Protocol – Patricia Kane, PhD
11:30 am	12:30 pm	Application of the Membrane Stabilizing Diet – Carrie Loughran, RD
12:30 pm	1:00 pm	Membrane Stabilizing Lunch
1:00 pm	4:00 pm	Clinical Application of the BioMedical Membrane Stabilizing Protocol



Membrane Medicine Academic Symposium

MEMBRANE MEDICINE ACADEMIC DAY ONE – FRIDAY, JUNE 12TH

8:00 am	8:30 am	Power Breakfast and Registration
8:30 am	10:00 am	Life on the Membrane – Edward Kane
10:00 am	10:30 am	Repletion Break
10:30 am	12:30 pm	Membrane Medicine: A Phospholipid Approach to Illness – Patricia Kane, PhD
12:30 pm	1:00 pm	Membrane Stabilizing Lunch
1:00 pm	2:30 pm	Membrane Medicine Euro Clinical – Katrin Bieber, MD and Meinrad Milz, MD
2:30 pm	3:30 pm	Lipid Whiskers, Cardiolipin, Phospholipids and Microtubules – Edward Kane
3:30 pm	4:30 pm	Alzheimer's as a NeuroMetabolic Model – Patricia Kane, PhD
4:30 pm	5:00 pm	Power Break, Let Them Eat Cake viva Paleo
5:00 pm	6:30 pm	Membrane Medicine Oral and Intravenous Phospholipid Therapy

MEMBRANE MEDICINE ACADEMIC DAY TWO – SATURDAY, JUNE 13TH

8:00 am	8:30 am	Power Breakfast
8:30 am	10:00 am	Disturbed Methylation, Epigenetics, Biomedical Detox – Patricia Kane, PhD
10:00 am	11:30 am	Epigenetics and Neurotoxicity – Damien Downing, MD
11:30 am	12:00 pm	Power Break, Let Them Eat Cake viva Paleo
12:00 pm	12:30 pm	Phospholipids and Refractory Seizure Disorders – Carolyn Matzinger, MD
12:30 pm	1:30 pm	Neurometabolic Disease: MS, ALS, Parkinson's, Autism, Seizures – Patricia Kane, PhD
1:30 pm	2:00 pm	Membrane Stabilizing Lunch
2:00 pm	2:45 pm	Innovative Evaluation and Biomedical testing – Patricia Kane, PhD
2:45 pm	3:30 pm	Forming Oral and Intravenous Protocols
3:30 pm	5:00 pm	Clinical Case Studies, Chart review, Clinical Progress Drs. Kristine Gedroic, Kara Nakisbendi, Sheryl Leventhal, Katrin Bieber, Ralph Holsworth, Patricia Kane

Clinical Session in Dr. Carolyn Matzinger's Health Center

5:30 pm	8:30 pm	Clinical Session: Advanced Membrane Medicine Intravenous Therapy
5:30 pm	8:30 pm	Think Tank: Phospholipids & Balanced EFAs in Clinical Practice, Research & the ER

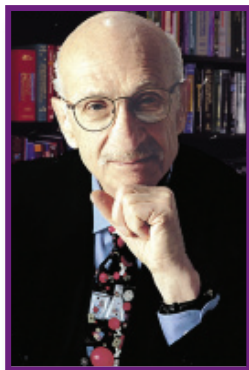
MEMBRANE MEDICINE ACADEMIC DAY THREE – SUNDAY, JUNE 14TH

8:00 am	8:30 am	Power Breakfast
8:30 am	9:15 am	Revitalizing via the BioMedical Colonic – Virginia Marston, RN, ND
9:15 am	11:00 am	Biohacking Biofilm, Stabilizing the Microbiome – Kristine Gedroic, MD
11:00 am	11:15 am	Power Repletion Break
11:15 am	1:15 pm	Microbiome: Fecal Microbiota Transplantation – Glenn Taylor
1:15 pm	1:45 pm	Membrane Stabilizing Lunch
1:45 pm	2:45 pm	Brain on Fire, Neurometabolic Psychiatry – Edward & Patricia Kane, PhD
2:45 pm	4:30 pm	Clinical Case Studies: Oral, Colonic and Intravenous Protocols Drs. Kristine Gedroic, Kara Nakisbendi, Sheryl Leventhal, Carolyn Matzinger, Patricia Kane, Virginia Marston, Glenn Taylor

Featured Speakers



Patricia Kane, PhD
Millville, NJ



Edward Kane
Millville, NJ



Kristine Gedroic, MD
Morristown, NJ



Meinrad Milz, MD
Germany



Carolyn Matzinger, MD
Las Vegas, NV



Katrin Bieber, MD
Germany



Thomas Wnorowski, PhD
Millville, NJ



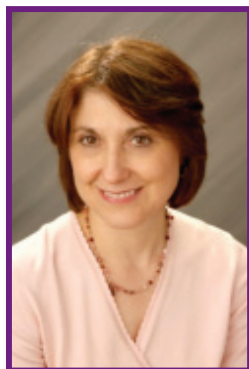
Sheryl Leventhal, MD
Valley College, NY



Virginia Marston, RN, ND
Galeana, Mexico



Damien Downing, MD
United Kingdom



Annette Cartaxo, MD
Morristown, NJ



Neal Speight, MD
Charlotte, NC



Kara Nakisbendi, MD
Philadelphia, PA



Ralph Holsworth, DO
Denver, CO



Carrie Loughran, RD, LD
Portland, OR

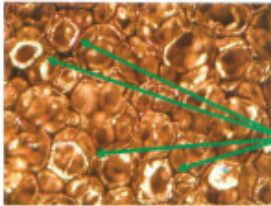


Glenn Taylor
United Kingdom

Normalization of Phospholipid Membrane with Oral Phosphatidylcholine

Five year old female with an undiagnosed neuromuscular disorder presented with a gross distortion of her phospholipid architecture with abnormal lipid binding in June 2010. After 4 months (Oct 2010) of oral phosphatidylcholine imaging of her lipid membrane shows marked improvement along with normalization of her mitochondria (an immune-viral complex was isolated on the mitochondria). Patient is now able to walk with assistance, marked improvement in coordination and muscle tone, and increased growth and development.

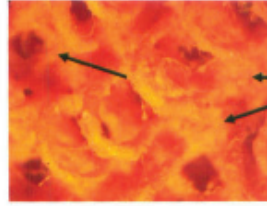
BEFORE



Layered polarization/fluorescence image
Outer surface of the plasma membrane

White areas look like oxidative damage but that is **not** the case (malondialdehyde is **not** present)
White areas reflect abnormal lipid binding at the ends of the (roughly hexagonal) bundles of saturated fatty acids – structural components of the membrane.

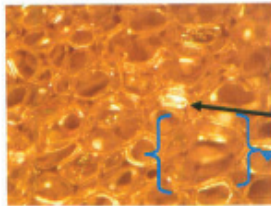
BEFORE



Very high magnification fluorescence
Arachidonic acid/other fatty acids

'Muddle' where saturated structure usually sits comfortably between the arachidonic acid loops. See comments re: CDP diacylglycerol on cardiolipin report

AFTER ORAL PK TREATMENT

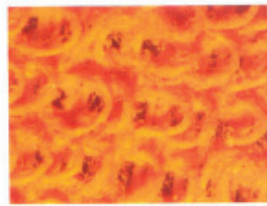


Layered polarization/fluorescence image
Outer surface of the plasma membrane

Please compare with previous findings. It is now much more difficult to find areas with **abnormal lipid binding**. This is the most affected area that I could find.

1 or 2 large FA structures per cell

AFTER ORAL PK TREATMENT



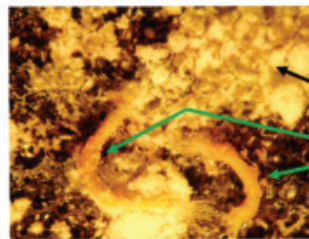
Very high magnification fluorescence
Arachidonic acid/other fatty acids

Highly significant improvement. Excellent 'organisation' of unsaturated fatty acids

Normalization of Phospholipid Membrane with IV Phosphatidylcholine

Male patient, age 82, with a history of prostate cancer. Initial pictures reveal gross oxidative damage to the cell membrane surface, phospholipid membrane and mitochondria after invasive radiation therapy. PSA levels spiked and patient was in extreme spinal pain. Patient received intravenous IV PK Protocol (Phenylbutyrate, Essentiale, Glutathione) and high dose oral lipids for 2 months prior to visiting oncologist Meinrad Milz in Germany. Pain was diminished 50% and patient was able to comfortably travel to Germany for hyperthermia and IV PK Protocol therapy for 2 weeks. Pain was completely eradicated on the first visit in May 2011 and PSA normalized. Patient continued IV and Oral PK Protocol therapy at home and returned for a check up in Germany December 2011. Patient's condition is stable and he is enjoying his renewed life.

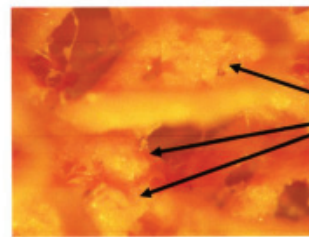
BEFORE (AUGUST 2010)



Layered polarization/fluorescence image
Outer surface of the plasma membrane
(x15 higher magnification than usual)

Marked oxidative damage

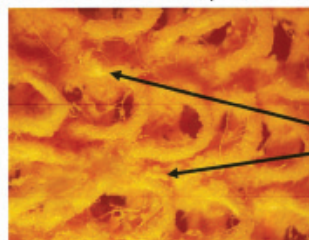
Diolein or similar toxic lipid(s)



Very high magnification fluorescence
Arachidonic acid/other fatty acids

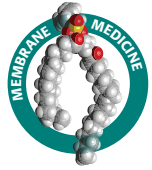
Diolein or similar toxic lipid

AFTER IV PK TREATMENT (DECEMBER 2011)



Very high magnification fluorescence
Arachidonic acid/other fatty acids

Essentially normal but some very small areas that still shows oxidative damage



NEUROLIPID
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MEMBRANE MEDICINE: NEUROMETABOLIC CELLULAR STABILIZATION WITH LIPID THERAPY FOR TREATMENT OF NEUROLOGICAL DISEASE

Patricia Kane, PhD - Director

NeuroLipid Research Foundation, 501(c)3 non-profit
45 Reese Road, Millville, NJ 08332 USA • Ph: 856.825.8338 Fax: 856.825.2143

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Kristine Gedroic, MD

Ralph Holsworth, DO

Katrin Bieber, MD

John McLaren-Howard, PhD

Meinrad Milz, MD

Abstract

Maintaining the appropriate balance and content of lipids in cellular membranes is critical for normal neural processes. Accumulating evidence suggests that even subtle perturbations in the lipid content of neurons and myelin can disrupt their function. The membrane and organelles within the cell are the primary focus of electrical discharge within the central nervous system and can be stabilized with phospholipid therapy and a Phospholipase A2 (PLA2) suppressive diet which is a targeted phospholipid, nutrient-dense, membrane stabilizing diet. The brain is 60% lipid, containing phospholipids, which comprise the plasma and organelle membranes, along with cardiolipin, located exclusively in the inner lipid membrane of mitochondria and myelin, and is a target for toxic exposure. Stabilization of cardiolipin is a primary therapeutic target in neurotoxic disorders 'brain on fire' which may be addressed using lipid therapy. Recent research has revealed that in the brain myelin acts as one enormous mitochondrion. Examination of red cell lipids at Johns Hopkins Peroxisomal Diseases Laboratory in subjects with encephalopathy, psychiatric syndromes, seizure disorders, super-refractory status epilepticus, rare diseases, Autism, Alzheimer's, Post Stroke, neurolyme, Chronic Fatigue Syndrome, neurofungal toxicity, Multiple Sclerosis, Motor Neuron and Parkinson's Disease over the past 15 years in 9000 analyses has revealed a characteristic accumulation of very long chain fatty acids (VLCFAs), which comprise lipid rafts, or ceramides, depicted as cell membrane derangement per disturbance in peroxisomal respiration, which has a vital role in cell membrane integrity and function. Membrane phospholipid abnormalities with elevation of VLCFAs may be indicative of exposure to neurotoxins resulting in suppressed peroxisomal beta oxidation of VLCFAs. Patients with psychiatric syndromes present with a very low total lipid content and often overmyelination indicative of mitochondrial lipid disturbance and an increase in sphingomyelin with a marked decrease in phosphatidylcholine in the outer membrane leaflet of their cell membranes. Identification of nuclear and mitochondrial DNA adducts (toxins) has revealed a link between toxic exposure and the development of cell membrane derangement / dysfunction linking epigenetics to these neurometabolic syndromes. In our current studies we have captured visual images of distorted phospholipid membranes and have linked the impact of the DNA adducts (toxins) altering gene expression to aberrations in lipid metabolism, cellular dysfunction and alteration of the structure of phospholipids in the cell membrane characteristic to the presenting diagnosis and symptoms. Our treatment protocol includes an oral targeted lipid therapy with and a membrane stabilizing diet with supplemental protocol (phospholipids and SR3 oil), and in some cases an intravenous infusion of phenylbutyrate, phosphatidylcholine/Essentiale, leucovorin, and glutathione to clear bioaccumulation of toxins impacting gene

Methods

Applying the Advanced Membrane Stabilizing protocol adult and pediatric patients are given weekly one to two multi gram bolus infusions of phosphatidylcholine, followed by Growth Factors, Leucovorin (folinic acid) and rGSH Fast Push and Ascorbic Acid administration. In addition, Sodium Phenylbutyrate as 3 to 5 grams is administered in an IV drip twice weekly.

Oral therapy includes unsaturated lower order fatty acids as a 4:1 omega-6 to omega-3 oil, Evening Primrose oil, EPA, Fatty Alcohols, Calcium / Magnesium Butyrate or Sodium Phenylbutyrate, Phosphatidylcholine (PC), co-enzyme and methylation support-folinic acid, tetrahydrobiopterin, riboflavin, NADH and methylcobalamin (by injection). Targeted treatment protocols are utilized after red cell lipid analysis has been completed.

- 1) Phenylbutyrate per oral and IV to stimulate the peroxisomal beta oxidation
- 2) Bolus intravenous Phosphatidylcholine as Lipostabil or Essentiale N
- 3) Methylation factors -folinic acid, riboflavin, methylcobalamin, tetrahydrobiopterin
- 4) Sulfation support - IV Glutathione and oral branched chain amino acids
- 5) Ascorbic acid per oral and IV
- 6) Growth factors per IV application with phospholipids
- 7) Electrolyte and trace mineral and vitamin co-factors per oral supplementation
- 8) Utilization of a nutrient dense, carbohydrate limited diet to control Phospholipase A2
- 9) Targeted EFA oral intake per test RBC fatty acid test results

Results

The use of oral and IV lipids has facilitated stabilization of phospholipids in cellular membranes thereby addressing cell membrane integrity of our patient populations along with clearance of toxins from the nuclear and mitochondrial DNA, cardiolipin, proteins (enzymes, metallothionein) and normalized cellular function. The addition of intravenous phenylbutyrate addresses neuroinflammation by increasing the beta oxidation of VLCFAs. Growth factors stimulate neuroregeneration. Disturbances in methylation due to toxic exposure may destabilize the membrane phospholipid structure and alter DNA expression thus methyl co-factors are integral to therapy.

We have noted the clearance of the bioaccumulation of toxins on the DNA adducts and stabilization of membrane function in our patients after initiating clinical treatment four to six months after onset of lipid therapy. The use of the membrane stabilizing intravenous lipid protocol, clears ~ 70% of the intracellular toxins, particularly those on the DNA adducts after 20 bolus lipid infusions. Intensive oral nutrient therapy is also simultaneously utilized. We have noted marked and sustained clinical improvement within the first few weeks after initiation of treatment in our combined patient population of 500 subjects using Acumen cellular function analysis for verification and clinical observation of patient's status, especially in regard to neuroinflammation. Expansion of the Advanced Membrane Stabilizing protocol with bolus PC dosing, IV Phenylbutyrate, growth factors and ascorbic acid has yielded further improvement in our patients.

Conclusion

Application of bolus Phospholipid therapy with Phosphatidylcholine (Essentiale N), Growth Factors, Leucovorin, Phenylbutyrate, Co-Enzymes, Methyl factors and Glutathione have been successfully utilized in clinical settings throughout the US and abroad. These results demonstrate that lipid therapy may reverse prevalent symptoms and stabilize aberrant neurochemistry in patients with neurological disease, and should be considered for more formal studies. Further clinical studies are in progress in preparation for university based trials. The administration of our lipid-based protocol may offer a new therapeutic strategy for neurological and other diseases involving toxic exposure.

We have documented significant clinical neurological improvement in our patients, along with marked normalization of cellular function (via laboratory analysis) following three months of an oral and intravenous lipid regime. Recently we have had the opportunity to treat acute cases in a hospital setting successfully, coma following encephalopathy, a suicide attempt and synthetic marijuana intoxication. The administration of our phospholipid therapy as Membrane Medicine may offer a new therapeutic strategy for patients with neurological disorders arising from infectious and toxic exposures.

Conference Location

Hampton Inn & Suites
3245 St. Rose Parkway
Henderson, NV 89052

www.hendersonsaintrosesuites.hamptoninn.com



Clinical Sessions Location

(All Day Thursday | Saturday Evening)

Matzinger Institute of Healing
3031 West Horizon Ridge Parkway
Henderson, NV 89052

Accommodations

Hampton Inn & Suites

Tel: 702-385-2200

The M Resort Spa Casino | Las Vegas

Tel: 702-797-1000



Register Now For Symposium and Clinical Sessions Membrane Medicine Biomedical Symposium

Academic - Friday, June 12th – Sunday, June 14th, 2015

LOCATION: Hampton Inn & Suites • 3245 St. Rose Parkway • Henderson, NV 89052

Membrane Medicine Academic 3-Day Symposium: **\$900.00 early bird price**
\$1200.00 After May 9th

Clinical Sessions - Thursday, June 11th, 2015

LOCATION: Matzinger Institute of Healing • 3031 West Horizon Ridge Parkway • Henderson, NV 89052

Clinical Microbiome Revital Session with Biomedical Colonic: **\$250.00 early bird price**
\$450.00 After May 9th

Clinical Membrane Stabilizing Ketogenic Therapy for Seizures: **\$250.00 early bird price**
\$450.00 After May 9th

(No refunds for cancellations made after May 11, 2015. **SIGNED NON-DISCLOSURE IS REQUIRED**)

Mail or fax 856-825-2143 your registration
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