



CONVERGENCE

News, Links, and Insights
by JEFFREY BLAND, PHD



November 2019 - Mid-Month Bonus

Thank you for subscribing to Dr. Jeffrey Bland's newsletter. Enjoy and share this information, which is for educational purposes only. Always consult with a qualified healthcare professional when you are in need of medical advice, diagnosis, or treatment.

In this issue: The Vantage Point: "Advances in Integrative Nutrition" Presented by Jefferson Health's Marcus Institute of Integrative Health; Microbiota Transplant Protocol in the Works?; Classic FMU: Gerard Mullin, MD, MS

The Vantage Point: What's Been Happening in Dr. Bland's World?

Do you want to track Dr. Jeff Bland's activities, see photos from his travels, and find inspiration in his words? Follow his social media pages to stay connected!



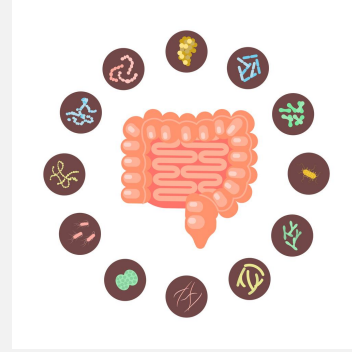
"Advances in Integrative Nutrition" Presented by Jefferson Health's Marcus Institute of Integrative Health

At the beginning of the month Dr. Jeff Bland had the pleasure of spending several days in Philadelphia speaking about nutrition at the invitation of Dan Monti, MD, Director of the Marcus Center for Integrative Medicine at Thomas Jefferson University. This was the first in a new series of educational programs that focuses on integrative medicine which Jefferson Health will be offering. It was a 3.5 day intensive filled with lots of education on integrative nutrition and the opportunity to connect with special colleagues in a wonderful city.

Microbiota Transplant Protocol in the Works?

There is long-standing discussion over the degree to which

autism is purely an issue of the central nervous system—or how extensively the [peripheral nervous system](#) is involved. While central inflammation is well characterized in autism, the digestive tract has its own specialized immune system, and the links between its network of nerve fibers, neurotransmitters, and its very bioactive resident microbes with the rest of the body are so complex that it has been called “the second brain.” The nervous system within the gut is increasingly recognized as an important seat through which autistic issues may be modulated, as dietary habits and gut microbiome can profoundly impact immune and overall function and comfort on a broad scale in these conditions. Maternal eating habits and obesity are also linked to manifestations of central nervous inflammation in addition to peripheral cardiometabolic issues, and maternal underweight status can also increase risk for autism.



Research conducted in 2017 found that transplantation with gut microbiota from a [standardized preparation](#) may not only benefit gut microbiome composition in autistic children, it can also significantly improve behavior while ameliorating their digestive symptoms and function. (The standardized preparation was made from screened, pooled, and filtered fecal material from healthy donors, and is similar to what is employed in recurring *Clostridium difficile* infection. It is termed Microbiota Transplantation Therapy to distinguish it from Fecal Microbiota Transplantation, which may be sourced directly from single donors, though [effects may be comparable](#) with either.) After success in that open-label pilot trial, researchers followed up on study participants. Two years after treatment, participants had retained some of their functional and compositional gastrointestinal improvements, and this research team suggested that Microbiota Transplantation Therapy (MTT) may represent a safe and efficacious [long-term treatment](#) for autistic spectrum disorders.

Due to the gut microbiome’s extremely dynamic composition and its responsivity to conditions and inputs, a few “ground rules” were applied in the experimental protocol in order to ensure enduring effects with MTT:

1. Antimicrobial pretreatment (2 weeks) followed by fasting and a bowel-cleansing preparation
2. Two days of a high oral dose or one day of a high rectal dose of the standardized gut microbiota preparation (a total of 2.5 trillion organisms per day)
3. Daily maintenance with a lower oral dose (2.5 billion organisms) of the preparation in concert with a stomach acid suppressant (for greater survival of the preparation’s microbes)

This more recent study also examined the effects of MTT on fecal bacteriophage (bacterium-associated virus) populations, and discovered that fecal phages are strongly affected by fecal microbiome changes; populations decreased shortly after treatment, and then gradually became more similar to those from the received MTT material. As research into microbiomes (and, indeed, all -omics) matures, phage research is also likely to become a growing field of study—perhaps not unlike the lag-time seen between fecal microbiome and fecal virome changes!

The fact that this standard protocol has achieved success in both *C. difficile* infection and in autistic spectrum disorders is heartening, and with clinical confirmation in larger populations, it may be well on the way to making fecal microbiota transplantation more practical for both patients and practitioners to put to use, better recognized as a valid and efficacious therapy, and potentially accepted as a superior long-term approach in multiple challenging conditions.

Classic FMU Interview: Gerard Mullin, MD, MS
The Foyer and Hearth for the Human Body

The multilevel gastrointestinal immune system. The enteric nervous system. The gut microbiome.

"We know that metabolic endotoxemia is the final common pathway to a lot of problems... We've got a hundred million people in America with chronic disease with chronic inflammation as a root cause, and one of [its] root causes is endotoxemia."
Gerard Mullin, MD, MS

Neurotransmitters, regulatory proteins, immune mediators, enzyme systems. The gastrointestinal tract is the home base for body nourishment, a crucial immune training ground, a combined welcome mat and surveillance area, and a major influence on short- and long-term metabolism, and one's gut microbiome provides an uncanny reflection of the quality of one's lifestyle and its impacts on health and function. In this FMU interview, Dr. Jeffrey Bland talks with Professor Gerard Mullin of Johns Hopkins Hospital (author of [The Gut Balance Revolution](#), which employs the 5R gut restoration program and the Mediterranean and anti-

inflammatory diets) about the dynamic ways in which we interpret and respond to our internal and external environments through this extraordinarily interactive system and its extraordinarily communicative metabolite and resident microbial communities.

Classic FMU Top Ten Clinical Pearls

Clinician-Scientist Gerard Mullin, MD, MS

1. For sustainable weight loss, gut microbiome composition and gastrointestinal function are increasingly recognized as integral factors.
2. As with nutrient insufficiency and toxicity, there may be uniquely individualized overages and shortages in digestive factors like enzymes, bile, peptides, acids, etc.
3. Stool elastase can be a biomarker for pancreatic insufficiency, which can contribute to irritable bowel symptomatology.
4. Besides their digestive roles, pancreatic enzymes also help maintain a very controlled environment in the upper gastrointestinal tract
5. Genetically-modified, gluten-rich wheat combined with gut-damaging agricultural chemicals is likely related to the rapid rise in gluten sensitivity and celiac disease diagnoses.
6. Some small yet significant percentage of dietary proteins may be absorbed as protein fragments having very different biological activities and influences on neurological and immune functions.
7. Relapses in Crohn's disease may relate strongly to gut barrier dysfunction, yet relatively few practitioners test for gut permeability.
8. Today, poor diet, dysbiosis, leaky gut, and medication are encouraging postprandial endotoxemia, all of which can cause or exacerbate chronic inflammation.
9. Science and medicine are developing respect for terms like leaky gut, dysbiosis, food allergy, endotoxemia, and irritable bowel, which aid understanding of common yet complex health issues that constitute preclinical disease processes.
10. Optimal balance between Firmicutes and Bacteroidetes in the gut microbiome may intensely individualized and dynamic, as both phyla have members that demonstrate positive and negative influences (even lactobacilli!) on function according to one's gene-environment-lifestyle interactions.

Get the full picture at: <http://jeffreybland.com/knowledgebase/august-2015-issue-gerard-mullin-md-ms/>

Functional Medicine Update Knowledgebase August 2015 Professor Gerard Mullin, MD, MS

Connect with Dr. Jeffrey Bland



©2019 Jeffrey Bland, PhD
All Rights Reserved

Newsletter Team

Jeffrey Bland, PhD - Publisher

Cheryl Kos, ND - Content Developer and Writer
Kirsten Miller - Content Editor
Annette Giarde - Subscription Manager