

Evolved Medicine: Patient Centered Care

Dr. Leo Galland

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James: Hello, and welcome back to The Evolution of Medicine Summit. This is your host, James Maskell. And I am so excited to have on the line today a legend of medicine in functional medicine, Dr. Leo Galland. Dr. Galland has been in this field and really started the field of functional medicine a number of decades ago and has been a physician.

He's a board-certified internist. He's part of the American College of Physicians and an honorary professor of the International College of Nutrition, but also came up with a lot of the concepts, things like leaky gut, placebo, and patient care, which we are going to be speaking about today and have played a massive role in the development of medicine over the last forty years.

And so we're so glad to have you on The Evolution of Medicine, Dr. Galland. So thanks so much for making time for being here.

Dr. Galland: Well, James, it's really a pleasure to be speaking with you today.

James: I appreciate it. So we're going to speak a little bit about the patient and patient-centered medicine today. But before we get into that, Dr. Galland, I'd love to ask and get your thoughts as to what you see as what's really wrong with medicine today.

Dr. Galland: All of the problems that the devil, conventional medicine, in the US today, I think can be traced to the same cause, which is something that the way that doctors are trained to think about patients is through the lens of disease. So the thing I ask is, "What disease does this patient have?" And you cannot treat a patient without having to apply a code, a number. And then the services that you render have to have a CPT code to describe it, whether that's a laboratory test or a treatment. And the CPT code has to match the ICD code. And it has to match it in such a way that a computer or a clerk with minimal medical background can see that there's a match.

Now, that says a great deal about the way medicine thinks about illness and health. And there's a kind of rayification of diseases as if diseases are real entities that exist in

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the world. And what happens to people is they get attacked by a disease. So you go from being a healthy person to someone who's sick because this disease attacked you.

Now, that very distorted way of understanding illness underlies virtually everything that makes people unhappy with the practice of medicine from the lack of personalization of care...Because after all, the doctor isn't thinking about the person who's sick. The doctor is thinking about the disease that the person has.

And this adage that everybody learns in medical school, "Well, you treat the patient, not the disease." Doctors aren't trained to do that. They're trained to treat the disease. And there's another adage that says, "If the only tool you have is a hammer, then every problem becomes a nail." And the same kind of thing occurs. Doctors are trained to treat diseases. Another problem in medicine is the hyper-specialization that's occurred and the excessive use and proliferation of laboratory tests. They're all related to this focus on the notion that people get sick because they get diseases.

And then, finally, another aspect of it is the excessive use of medical treatments towards the end of life, not necessarily to the benefit of the patient. And that also is a result of the fact that medicine is disease-centered, not patient-centered. And so the doctors are treating all these diseases that people accumulate before they die rather than treating the patient and trying to figure out what's going on with the patient.

Now, when I gave a presentation on patient-centered diagnosis years ago at the first functional medicine meeting, Jeff Bland said to me afterwards, he said, "What you've done really explains a problem that I'm running into." What was bedeviling Jeff at the time was he had been putting people on various nutritional protocols when he was at the Bellevue-Redmond clinic decades ago. And he was getting good results. And he was presenting those results at medical meetings. And the doctors who'd come to him and would say, "What diseases were you treating? What diseases did these patients have?" And they just couldn't understand the functional perspectives at all.

James: Yeah. It's so interesting. And yourself and Dr. Bland have done so much to take this medicine forward. So the phrase "patient-centered diagnosis" is sort of bandied around in all sorts of medicine now.

As someone who discovered this, what do you mean when you say patient-centered diagnosis? And how does it differ from an ordinary diagnosis?

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Dr. Galland: Okay. All right. Well, diagnosis is a process that underlies all human problem solving endeavors. And treating patients or helping people get better is basically a form of problem solving. And the word “diagnosis” is a Greek word that means knowing through the center. So it’s a way of knowing and understanding the nature of a problem. Just as a diameter is the measure of a circle taken through its center, a diagnosis is an understanding of a problem that gets right to the heart of the problem.

And just to go back to conventional medicine for a moment, the diagnostic approach in conventional medicine is called differential diagnosis. And it’s an attempt to answer the question, “What disease does this patient have?” What I realized early on was that, although this was not worthless and there was some value to what came out of the differential diagnosis, it was terribly inadequate for helping patients get better.

And as I worked with patients using nutritional and environmental protocols to help them get better, I realized that in order to help those patients, I was asking questions about the patient that had been totally ignored by the doctors who were treating the disease. In fact, the more conventional specialists the patient had seen without getting well, the more likely it was that I was going to be able to help somebody.

And so I looked at, “What are the questions that I’m asking about this patient?” either asking the patient directly or asking myself about them, and, “What kind of information is that giving me?” And I realized that I had discovered the basis for an approach to diagnosis that was based on the diagnosis of the patient and the disharmonies and imbalances in the patient that impact on the patient rather than what disease does this patient have.

And so in thinking it through—and this work goes back to the 1980s actually. It was presented at the first functional medicine meeting in Hawaii over twenty years ago—what I realized is that what we call a disease or an illness can actually be analyzed in terms of triggers, mediators, and antecedents. And that if we understand the triggers, the mediators, and the antecedents of illness in an individual, there’s a great deal that we can do to help that person get better above and beyond whatever is required for treating the disease often, instead of having to treat the disease because the disease is something that just begins to disappear when you deal with triggers and mediators.

And that the distinction between the physical realm and the psychosocial realm, that boundary begins to disappear, as well, because triggers and mediators and antecedents

are concepts that make sense when you approach people from a psychosocial perspective, not just a biomedical prospective.

James: Absolutely. That is so interesting. So what led you to discover sort of these three principles and this trio of factors?

Dr. Galland: Well, it actually started with the results of clinical practice. It didn't start as a theoretical philosophical endeavor. I just looked at what works and what was helping people. And what led me into an understanding of mediators actually, was the work that I was doing with essential fatty acids back in the 1980s recognizing that there were widespread deficits in omega-3 essential fatty acids and problems with the metabolism of omega-6 essential fatty acids in the population of patients I was seeing, and that this was contributing to inflammation and other inflammatory processes.

And I described this, actually, in all of my books. I've talked about the great importance of understanding essential fats and their impact on health. Actually, *Superimmunity for Kids*, which was the first book that I wrote, was based upon the recognition that most children in the U.S. were deficient in omega-3 fats. And there were dietary recommendations made for that purpose. And that was, perhaps, the first book that was actually published based upon the importance of omega-3s.

What is important about omega-3s is that they impact on health by influencing the formation of biochemical mediators in the body called prostanoids and eicosanoids. And there was a great deal of research in the second half of the twentieth century on the role that these played in cellular regulation. So that's where I started looking at mediators. And, of course, that's just the tip of the iceberg on mediators. I mean there's so many more.

James: I'd like to get into that as we go through today. I definitely appreciate everything that you've shared so far. And I certainly feel like a part of this evolution of medicine is starting to develop more of a patient-centered diagnosis.

What does it take for a physician to move? Because it doesn't sound like it's that easy if you've been trained as a physician always to do disease-centered medicine to now move into a field where you're doing patient-centered care? What does it take for a physician? And what would a patient feel different if they had a physician that did patient-centered care?

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Dr. Galland: Well, of course, for the physician it starts with education. And the education, there's one approach to education. Actually, I think there's two things that I think are really important. I think that doctors and other health practitioners need to really understand nutritional biochemistry and physiology and not to be afraid of biochemistry. In medical school, biochemistry was kind of the dreaded first year course.

When I started realizing the impact of nutrition on the body's chemical mediators, I really wished that that's the way I had been taught to begin with because I had to learn it for myself. And I had to go back and apply it.

So I definitely think that education in nutritional biochemistry and physiology is essential for making that change to a patient-centered diagnostic approach even if it winds up that the tools that you're using are not nutritional, primarily, at the end of the day because of whatever your special interests are, it really helps change the way that you think.

And the other thing is to look at the traditions of medicine. We really learned almost nothing about the history of medicine in medical school. And, yet, the historical aspects of medicine are grounded in a patient-centered approach. When I first started talking about patient-centered diagnosis, there would be some physicians in the audience who were experienced with Ayurvedic medicine or acupuncture. And so they knew traditional Chinese medicine. And afterwards, they'd come up to me and say, "You know, what you're talking about is exactly the way Ayurveda thinks or exactly the way traditional Chinese medicine thinks."

So I started studying ancestral medical systems. And I also started looking at pre-eighteenth century medicine in the west and the Hippocratic traditions and the traditions of Avicenna medicine in the Middle Ages. And I realized that an approach based upon harmony and balance rather than the identification and treatment of diseases is part of the legacy of medical thinking. What modern science added to that was actually a way to identify mediators and triggers.

And so at the same time that I was discovering something, I was just really discovering what was in the roots of the medical system that we have. It was there all the time. I mean, the great contributions of science to the practice of medicine starting in the nineteenth century were the discovery of triggers for the major devastating epidemic diseases. These were infectious organisms that were the triggers. And being able to recognize them and eliminate them was really what gave modern medicine such a

strong beginning because there were real changes in the health of people when you could identify and understand those triggers.

And during the twentieth century, especially the second half of this twentieth century, research into the mediators of illness—the biochemical and physiologic mediators—had a huge impact in advancing our understanding of illness and in helping with the development of drugs that can be effective.

So it wasn't as if I was inventing something new. I was discovering what already existed in our traditions, but had just been lost from sight because of bureaucracy and nearsightedness and this theory of diseases.

James: Absolutely. So you mentioned some pretty obvious triggers there like the microbes and things that we have had success with.

What are some hidden triggers that you found in your time and the other doctors have found that may be a bit less obvious, but also when removed can improve patient care?

Dr. Galland: Okay. Well, number one on the list are food-based triggers. Some of these are allergic. Let's just take gluten sensitivity as an example. We'll use the overarching term of food sensitivity. It might include allergy. It might include other kinds of immune response. It may include non-immune biochemical pharmacologic or physiologic responses to food.

They're very common. And they're very common in chronically ill people, especially those who haven't gotten solutions. And certainly gluten is receiving a lot of attention right now as I think it deserves to receive because there are a lot of people that are sensitive to gluten. But there are numerous food triggers. And being able to recognize them and have people make sometimes simple dietary changes can totally revolutionize their health.

I'll just give you an example. A patient consulted me recently with a long history of symptoms involving the GI tract and increasing muscular-skeletal pain, arthritic pain, fatigue, headaches. And her concern was, "Well, do I have Lyme disease?" I see a lot of people with Lyme disease. And in that context, *barrelia burgdoferi*, the organism that causes Lyme disease, is a common trigger for symptoms and one that needs to be recognized when it's present.

When I went through her history, I didn't really think it was consistent with Lyme disease. But I thought it was really consistent with some form of food allergy or food intolerance. And she had gained about thirty, thirty-five pounds. So we didn't have to worry about weight loss. It was actually something that she would have desired.

So I did not have a lot of confidence in the ability of food allergy testing to identify what she needed to avoid. She had already been through that process. So I had her go on a very strict elimination diet of a few foods. And within a week, her arthritis had dramatically improved. Over the next three weeks, her headaches had cleared. Her energy had improved.

We slowly began to expand her diet to something that she could live with. And she, along the way, began to experience symptoms in three different settings with particular foods, which led me to conclude that it wasn't really the foods. It was the sulfites that had been added to the foods that were the culprit and the main cause of symptoms.

At first, I'd really suspected that there was going to be gluten or some component of wheat. But it turned out it wasn't the wheat. It was foods that had had sulfites added to them. They were the ones that made her sick.

James: So what are some of the common ones outside of gluten? If you had to give a top three things in your practice that you've seen that are food triggers, gluten and other ones that are regular?

Dr. Galland: Oh, yeah. I don't know if I'd limit it to three. And it depends on the nature of the problems. Coffee. People who have chronic GI complaints, if they're coffee drinkers, about fifty percent of the time their GI complaints will improve significantly with the removal of coffee. I'm not against coffee. But there are people who are really sensitive to it. It's not an allergic reaction. And it's not even the caffeine. There are alkaloids present in the coffee bean that are a problem for them.

Sugar, of course, is a big one. Added sugar as opposed to the sugar that's naturally present in fruits and excess consumption of sugars is one of the major public health problems in our society. There are so many people that have really improved just by cutting out sugar and other processed foods and high-glycemic index carbs.

Wheat, as I've already mentioned. And the issue with wheat is not just gluten. It can be wheat starch, especially when people have a lot of chronic GI complaints. And this is something that I've mentioned in some of the lectures that I've given. When I see

people who have gotten somewhat better from avoidance of wheat or gluten, especially in terms of GI symptoms, not really with the problem totally, I suspect that they have a gut fermentation syndrome, and that using a diet that's low in fructans and fructose, which would include avoidance of wheat has made a big difference for those patients.

Dairy, another source of important triggers. And I would say casein, which is a leading allergenic protein, an immunogenic protein in dairy products is a significant culprit and something that has been an issue for autistic children, for adults and children with autoimmune disorders. And then for some people, corn and soy can be triggers, as well. Occasionally nightshade vegetables.

And, you see, that's the thing. There's no one solution. And it's not as if, "Oh, well, this is the diet for this disease." It has to be individualized to the patient. And that's where patient-centered diagnosis is critical.

James: Yeah, that's amazing. So that's some great food triggers there. Outside of the food triggers, what are some other hidden triggers that when removed can improve patient care?

Dr. Galland: Okay, next drugs, of course. That is drugs and medications and even supplements that a patient is taking. I recently saw a patient who had developed a disease that was very much like celiac disease: severe diarrhea, dehydration, weight loss. It had come on pretty suddenly over the last three months. And in going through her history, she'd had a very extensive GI workup. And there was evidence of inflammation in the GI tract. Why this had come on so suddenly and not really responded to any treatment wasn't clear.

Going through her history, she was taking a drug for the treatment of high blood pressure called Olmesartan or Benicar. And there are a handful of case reports of this provoking exactly that same kind of reaction that she had by altering the immune response. So removing Olmesartan from her treatment regimen just cleared up this celiac disease type of illness that she had or lymphocytic colitis as it was being called. So definitely, looking for drugs and other substances that a patient is taking is critical.

Environmental triggers are very important and are often ignored. And the two categories that are really important are mold and mold toxins. And then various volatile organic chemicals: formaldehyde and products that offgas from building materials. But formaldehyde's been a big one.

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And so looking at the environment that a patient is in, in detail and looking at their diet and what they're taking, in detail, is a critical step.

James: Yeah, absolutely. Well, Dr. Jeff Bland in the keynote presentation at the beginning here, talked about gene and gene expression. And now it's all about the environment that the genes are expressing in. It's almost true now that with what you've mentioned with all these triggers that really all medicine is environmental medicine, right? At this stage.

Dr. Galland: Yes, in a sense, especially if you include diet and nutrition and the environment.

James: Yes. It's made them play such a big role.

Dr. Galland: Exactly.

James: So now we've looked to the triggers. Can you explain to the patients that are listening now and maybe some of the doctors who haven't come across these kind of concepts what the concepts of a mediator of disease is and how they can be controlled without drugs?

Dr. Galland: Mediators as their name implies are intermediaries or intermediates. If the disease is a manifestation, then the mediator is something that is unleashed or activated by a trigger and then produces the manifestations of the disease. I mean, people sometimes think of mediators as the cause of disease. But they're not the causes. They're just part of the process.

And most of the medical treatments that are used outside of antibiotics, which are attempts to eliminate triggers, are actually treatments of mediators. They're mostly attempts to downregulate mediators that have become hyperactive. And you can even see that if you look at the category names for drugs. So we have beta blockers, calcium channel blockers, even antidepressants or proton pump inhibitor, antihistamines, H2 blockers. These drug categories are named for properties of the drugs that are for the most part inhibiting hyperactive physiologic processes that are driven by mediators.

And the categories of mediators include things like neurotransmitters and prostaglandins and leukotrienes. But the activity of a lot of these mediators, aside from being regulated by removing the trigger...And often removing the trigger obviates the need for dealing with the mediator. It just takes care of itself.

But above and beyond that—and this is really where I would say Jeff Bland’s focus on epigenetics is really important—there is an effect of diet, environment, and lifestyle on the way that these mediators are expressed and regulated in response to being triggered. And that’s where the effects of a high versus a low glycemic index diet, high fiber versus low fiber, high omega-3 versus high omega-6 in terms of fatty acid composition of the diet. These things all affects the expression of mediators. Now, that’s only one category of mediators. This biochemical mediators.

I think it’s also important for everyone to recognize that illness does not only involve biochemical mediators. It involves psychosocial mediators that determine all the behaviors that are associated with being a patient and being ill. And there are triggers for those psychosocial mediators. And the mediators include things like fear and anxiety. And the triggers for those things may be biological or they may be psychosocial. They may be due to interactions with other people. And there is continuous crosstalk between the psychosocial mediators and the biochemical mediators.

James: So when you say crosstalk, one is talking to the other and the other’s talking back. And they’re both influencing back and forth?

Dr. Galland: Yes, that’s right. Right. And it is not even reasonable to think about a person who is ill without recognizing that continuing crosstalk, which is why it’s really important for the patient to be at the center of healthcare and not just a footnote to the treatment of a disease.

James: Absolutely. It makes so much sense. So you’ve got your biochemical mediators, non-biochemical. In the non-biochemical realm, it seems to be clear more and more how big a role stress is playing. But that could be biochemical stress. And we’ve got lots of talks during the summit on different practitioners looking at different aspects of stress. It seems to be more clear that all different types of stressors are driving a lot of the visits to healthcare practitioners and a lot of the “disease” that we’re seeing. Are there other non-biochemical mediators that are worthy of looking at?

Dr. Galland: Well, when we look in the psychosocial realm, stress is actually a set of responses that basically are the description of various kinds of mediators. The triggers for stress or stressors are stressors. And they may be either physiologic and biochemical or psychosocial, cognitive. What a patient thinks about his or her illness, what they fear about it, how it impacts on the quality of life and function is vitally important for a physician or other healthcare practitioner to understand in order to be able to help guide that patient through an illness towards health.

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And actually one of the most important characteristics in this area is a concept called self-efficacy. It's a patient's belief that he or she actually has the power to influence long-term health and short-term health. And one of the big problems with the disease-centered approach is it just robs patients of self-efficacy. I mean, it basically says, "I'm the doctor. You're the patient. This is what's wrong with you and here's the treatment."

And if the treatment doesn't work, then the person is in a downwards spiral of discouragement and depression. And, of course, that's something that leads so many people away from alternative medicine to integrative and functional medicine. So the measures that a health practitioner can take to enhance the patient's perceived self-efficacy are an essential component of treatment.

James: Absolutely. Yeah, now that's so crucial. Just before we get into the last concept, I just want to ask you this. One of the things about having a patient-centered model is that the patient actually now has to be involved. And so there's sort of a process of stepping up for patients that's not completely normal for them where they're used to being just sort of taken care of by the doctor. The doctor knows what's wrong with them and can deal with them.

What are some of the processes that you've, in your career, helped patients to understand that they are now a part of the process? If they want a patient-centered model, then they're going to have to actually be running the show.

Dr. Galland: Well, that's actually one of the ways in which nutritional approaches make such a beautiful contribution to a patient-centered approach because the diet is something that the patient has to control themselves. So what I do with my patients is I involve them in making dietary changes. Now, for some people, the best way to make those changes are kind of dramatic. The person that I mentioned whom I put on the few foods elimination diet, she was clearly ready to do that. And that was definitely the way to go. But there are other people who have to work with small steps and small changes. And sometimes it takes a long time.

What happens with nutritional changes, the person begins to realize that they can take control. And, in fact, by making changes in what they eat—and everybody eats for the most part at least three times a day—that they can change the way that they feel. That's very empowering.

The next step for the practitioner is realizing that different people need different things from the health practitioner. I think this is a very important part of being patient-

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centered. That there are people who really need a doctor to say, "This is what you need to do," and to be very directive. And there are other people who actually don't want to hear that. They are ready to be a collaborator from up front. And so I think part of the assessment process is to see, "Where is this patient's needs in terms of readiness to change and the kind of the relationship they want from a doctor?"

James: And that can be dynamic, too. It might start out as one thing and develop into the other, right?

Dr. Galland: Yeah. As most things in medicine are, it is dynamic. And it will change because when you start working this way, the patient changes. And actually one of the most satisfying things that happens to me is when I see a patient that I haven't seen in many years who comes back in for some reason.

And I ask them, "What's been going on the past few years since I'd seen you last?" And the person will say, "Well, you know about four years ago, I started to get a return of some of those symptoms that you had helped me with. And I was going to call you and come in. But I thought, 'Well, what would Galland tell me to do?' And so I went and did it. And it got better." Then I know. I mean, I love that kind of thing because I know I really accomplished what my goal is to educate the patient.

James: That's a real sustainable change. And one of the things that we'll be looking at throughout this summit are other concepts like that. We have a doctor talking about the concepts of the family as sustainable change. So now that one person's improvement then can pass onto other members of the family or throughout their social groups because they see that empowerment. They feel it. They know what to do. They're educated. And then they can pass that through.

So this is really the evolution of medicine. I'm so glad you shared that. And I'm so glad we're talking about this topic. I could talk about this stuff all day because it's my favorite. But before we get into that, do you want to just talk a little bit about the antecedents because I know that's the third part of your sort of trilogy. And I know that it's an important part for understanding this methodology of understanding disease in a patient-centered model.

Dr. Galland: Right. Well, the antecedents are all those factors that led to the person becoming ill to begin with. They're the factors that led to the exposure to the triggers. And they're also factors that influence how we reactive their mediators are to stimulation

and the kind of balance of mediator stimulation. And there are two components to that. I call them congenital and acquired.

Congenital actually can be divided into two parts, which are genetic and epigenetic, or if not epigenetic, somehow the result of exposures in the womb. And there's a lot of research that's going on now that is helping to clarify the genetic and epigenetic and intrauterine exposures that impact on a person's health later in life.

James: So what you're talking about is transgenerational toxicity and transgenerational stress where it goes from one level of family to the next?

Dr. Galland: Yes. Yeah. That's definitely an important part of that. And then they acquired all the various accumulated burdens that occur during the course of a person's life. Some of these are toxic. Some of these are due to nutritional depletion. The gut microbiome is an area that I've had tremendous interest in for decades even before there was a term "microbiome."

James: Before it was cool, right?

Dr. Galland: Yeah. Right. Right. When doctors would say, "Leaky gut? There's no such thing as a leaky gut. Dysbiosis? What the hell does that mean?" That kind of attitude, you know. Now, it's concepts like leaky gut and bacterial dysbiosis are all over the mainstream of medical research. And the microbiome is being looked at as one of the concepts that may really alter the practice of medicine in the coming decades.

James: Yeah. And I completely believe in that. That's one of my passions, actually, for this. I heard a doctor in 2012, Bob Rountree speak at an ACAM conference about the microbiome. And I was hooked. I had to learn everything about it. And it's been a huge interest for me and it's sort of led in this direction.

Do you see the microbiome as a trigger or a mediator or is it both? It's so complicated.

Dr. Galland: Well, first of all alterations in the microbiome are just definitely part of the antecedents of illness. And some of those may be transgenerational. That is the mother's microbiome during pregnancy will impact on the immunity of the child. And that's a very exciting area of ongoing research right now. And especially in early life, the composition of the microbiome molds the immune system and may also mold the nervous system, as well. It impacts on brain development and plasticity. It's hard to find areas that are not influenced by the microbiome at this point in time.

But the microbiome can also be a source of triggers. That there may be specific organisms that act as triggers for illness. And the one that first came to my attention decades ago was yeast. And it's still very valid and very much an issue. And researchers are beginning to catch on to that because now they're talking about microbiome as a component of the microbiome that impacts on health. So it's taken a long time for mainstream scientific research to catch up with the yeast concept. But it's getting there.

James: Yeah, how does it feel at this point in your career to know that things that you were talking about three decades ago are now sort of becoming part of the big discussion because I hear people say that medicine is always like—some people say thirty—some people say fifteen years behind the latest science. But with the internet, that's another part of this evolution of medicine is now this information is available via the internet. People can find it. And what we're hoping to do is accelerate this evolution of medicine. But how great is it that all of this is sort of being justified now?

Dr. Galland: I would put it in the category of it's very nice. And it's very reinforcing that ideas that made sense decades ago are actually being found to be scientifically valid and that there's an increasing acceptance of those concepts. But the truth is on a daily basis, once you solve one set of problems, you have to figure out how to get beyond those to the next set of problems. And so I'm basically continually focusing on "What haven't we figured out? What do we need to do next? How do we get to the next level?"

And when I first started doing this work and lecturing about it, I would return sometimes to the same meetings I'd been to a year later. And what was very gratifying at that time was that the practitioners who were in the audience would come over to me and say, "Hey, you know what you discussed last year about magnesium or omega-3 fatty acids, I started applying that in my practice? It really made a difference." And that was great to hear because I knew then that it wasn't just me and my ability to work one-on-one with patients, that it was helping, that there was real validity to these concepts that were not just dependent on me as an individual. So that was great.

But what would happen is over the years, I would start seeing patients—the patients that I see are generally people who have been to a lot of other practitioners before and are still stuck. And that's why they come looking for me to see if I can help them with something new or some additional insight. And so after a while, the things that I had been lecturing about had been pretty widely disseminated, especially among integrative practitioners.

So the patients that started coming to see me had already been through those approaches to treatment. And they hadn't gotten better. So it was then incumbent upon me to figure out, "Okay. What's missing here? What are we not seeing? What's the next thing that we have to look at?"

And that's basically how I spend most of my time. It's not thinking about, "Wow! This is great." I mean, basically, it's very nice to have these concepts get wider recognition. But at the end of the day, that's not what's important in my practice. It's dealing with what we haven't figured out yet.

James: Absolutely. And it really brings us back to the title of what you're talking about with the work that you're doing there and what you spend all your time doing. You've described a patient as a work of art. What do you mean when you describe a patient as a work of art? Because I feel like I'm hearing it. But I'd love to get more of an idea of what you mean when you describe a patient as a work of art.

Dr. Galland: What is it that makes something a work of art? It's that it's irreproducible. It's unique. And when I say the patient is a work of art, what I mean is that each patient is unique and needs to be understood by the health practitioner as being unique. Just the way as we look at a work of art, we recognize that in that work of art there is something that doesn't exist in any other work of art. And a copy of a work of art is not the art. The art is in the original.

James: Yeah.

Dr. Galland: And, of course, the challenge is uniting science and art because the scientific method depends upon a replication and reproducibility. And so being able to take things that are understood through a process, which is scientific and apply them to individual patients is the art of medicine.

James: Absolutely. Well, I think that's extremely clear. And I really appreciate it that, doctor. And I definitely appreciate you laying out this framework because I think that if you're a patient and you can understand this, understanding your health through these concepts is huge. And if it's a doctor, there's going to be a lot of doctors that never been introduced to these concepts. I think this is a great starting point for them to understand it.

One of the things that I've been doing throughout and I will be doing throughout this summit is really just getting an idea from you doctors to just your broader thoughts on

the evolution of medicine. When I say the words, “The Evolution of Medicine,” I know you’ve been involved with the evolution of these kind of concepts. And you’ve got the Linus Pauling award for your work in doing this. Obviously, the microbiome is a big part of our evolution. You’ve been in evolutionary medicine it seems like for a long time.

When I say the words, “The Evolution of Medicine” what does that really make you feel or think about?

Dr. Galland: Well, medicine is a dynamic process. And it continually changes. The direction in which it needs to evolve is a patient-centered direction. I think that the scientific tools to enhance that exist. I think the social structures and the culture are working against that. And so I think the culture of medicine has to evolve in a direction that is patient-centered. That’s going to involve fighting the bureaucracy of medicine.

James: Yeah. Oh, I see that for sure. But what’s your greatest and happiest vision for the future of medicine?

Dr. Galland: Well, what I’m really hoping to see is that this kind of patient-centered approach becomes the standard approach. This is what’s de facto. This is what’s done first rather than reliance upon disease treatment as the first approach. It’s educating people to understand their bodies, to understand the impact of their lifestyles on the mediators of illness, being able to recognize triggers for illness. I think that doctors should primarily be teachers. That should be the first step. Then, of course, the word “doctor” means teacher.

James: Absolutely. Well, Dr. Galland, thank you so much for your time today on The Evolution of Medicine Summit. I think this has been a great session. I really appreciate everything that you’ve done to get the conversation from where it started in the 1960s to where we now in 2014 where I feel like we’re getting to a tipping point where we really start to see that this has to happen for so many reasons: social reasons, fiscal reasons. There’s a lot of reasons why this is happening, but not only the clinical reasons, as well.

I just want to honor your work in getting medicine to this far. And I hope that with this summit and with the work moving forward, we’ll be able to take forward some of these concepts even beyond that and for a long time into the future. I completely agree that patient-centered care is going to be the future of chronic disease management, and I hope all of medicine. And I just want to share my appreciation for what you’ve brought here today and what you’ve done in your career. And I know that you’re not nearly

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finished, as well. I know there's a long legacy of work that you're doing with Pill Advised through your son Jonathan and all the great work that he is doing.

So thank you so much for all of your time and being here today.

Dr. Galland: Well, James, I want to really thank you for putting this together because it's a really important event. And it's been a pleasure talking with you.

James: Thank you so much!

This has been Dr. Leo Galland. This is The Evolution of Medicine Summit. I'm your host James Maskell. We've got lots more talks coming up and a great week. And we hope to see you at many, many more. Tune back in and we'll see you next time! Thanks very much!