Joel Robertson, PharmD: The Critical Role of the Brain in Health and How This Leads Medicine to One Size Fits One

Interview by Craig Gustafson

Joel Robertson, PharmD, is a widely recognized leader in the area of brain chemistry, an internationally recognized clinician, an author, a lecturer, and a consultant. He is a 1974 Graduate of Ferris State University with a bachelor of science in pharmacy. He completed his PharmD degree at the University of Michigan in 1975 and later did postgraduate training at Harvard University in behavioral medicine. He received an honorary doctorate in health sciences from Ferris State University in May of 2013.

His proprietary Performance Enhancement Programs are based on precision medicine and “prescribing” lifestyle, dietary, exercise, and behavioral modifications. He holds patents for programs developed for diagnosis of individuals using artificial intelligence, precision medicine, and regionalization.

The treatment protocols from Dr. Robertson’s programs, as well as his recommendations, have been substantiated and documented in conservative medical journals such as the Lancet, the Journal of the American Medical Association, and the New England Journal of Medicine.

He is presently the founder and CEO of Robertson Global Health Solutions Corporation; Robertson Health Services, Inc; Robertson Research Institute; Robertson Wellness; and the Robertson Family Foundation, together called Robertson Health. Robertson Health is dedicated to making a lasting impact on health care around the world through a network of for-profit and nonprofit organizations. This network of companies shares a common goal: to save lives and improve quality of life through health information technology. The vision is backed by Dr. Robertson’s global initiative to change world medicine.

Dr. Robertson has been a featured speaker at numerous professionally sponsored conferences and has written 8 books translated into 4 major languages. He has been awarded research contracts from the Department of Health and Human Services, the Bill and Melinda Gates Foundation, and Johnson and Johnson Pharmaceuticals. He has been recognized by Rotary International, Rotary Clubs of India, and Rotary Clubs of the Dominican Republic for his humanitarian efforts. He is the recipient of the Finalist in Medicine Award from Computerworld as the developer of one of 5 best medical software solutions in the world, nominated by Steve Ballmer, CEO, of Microsoft Corporation. (Adv Mind Body Med. 2014;28(1):18-25.)

Advances in Mind-Body Medicine (Advances): What are your earliest memories of wanting to practice medicine and was there an event or a series of events that solidified this desire?

Dr. Robertson: My passion was to practice veterinary medicine; I loved animals—loved horses. My dad, in his wisdom when I was about 16, said “Why don’t you shadow a vet?” He chose a vet who worked with large animals, and in particular, the animal that I was least interested in: cattle. We went out to where there was a cow having a breach birth and the vet said, “Stick your arm up there and pull that cow out.” At that particular point, with my face in the rear end of the cow, I decided this is not what I want to do. I turned around and went to work in a drug store, a pharmacy, and immediately got fascinated with pharmacology.

Even at 16, the whole concept of “What are we doing here in medicine?” hit me and I realized that there has got to be a better way to practice this. I saw tremendous noncompliance—just as a stock boy. I think that is where the passion came from; it always came as an element of trying to figure out a better way to do something and that has been the journey I have been on all of my life.

Advances: Where did you go to medical school?

Dr. Robertson: I fortunately—or unfortunately—started attending a community college at 16 and was heavy into math. I earned a bachelor’s degree in pharmacy from Ferris State University. From there, I went to the University of Michigan and then did a little bit of postgrad stuff with Harvard in the area of family medicine: addiction and family
behavioral medicine. The math background was very important—that was all I could get while I was still in high school—but it has been interesting how that has been a foundation for all the informatics and stuff that I do.

Advances: Can you describe any events or circumstances during your education that particularly shaped your perspective on medicine?

Dr Robertson: My first, what I would call internship, was in the area of cardiovascular pharmacology. I remember working only in the area of cardiac emergencies at that point. In those days, about 1 out of every 3 people that came into the emergency room with cardiac arrest would survive. What was most interesting to me for the 1 out of 3 who survived, we identified some issue—dietary, exercise, smoking, or something else—and told them that it contributed to their heart attack. What just blew me away is how few people did anything about it.

I saw some very disciplined people, some corporate executives, yet they had zero discipline on their health. From my perspective, that brought to mind something that Apostle Paul wrote and I have remembered throughout my life: “Why do I do what I do not want to do and why do I not do what I want to do?” This issue is more than 2000 years old. These people are not doing what they want to do. They might begin exercise but it stops.

That is when my passion changed to neuropharmacology. My hypothesis then was that compliance has something to do with brain chemistry, neuropharmacology, or neurohormonal reactions that just will not keep us doing what is best for us. I have spent the last 25 years pursuing that passion.

Advances: You have written about the neurochemistry involved in emotion, and in particular, the article I read focused on love. Describe for us what is happening inside our brains when we fall in love.

Dr Robertson: A lot of people tend to look at neurotransmitters as being the primary element in our brain. That is why we have medication such as serotonin reuptake inhibitors, etc. What I think is fascinating with things such as love and passion is that there are 2 things that will happen: One is when a neurotransmitter is acting as a neurohormone—that is where the reward is set up so it is probably the endorphin, dopamine, methionine system that kicks in and says, “This is pleasurable.” I refer to that as a physiological reward.

The second is that you do get a neurotransmitter change that gives you energy—gives you the whole element of feeling positive. Now, if you have low serotonin this change might be a raise in your serotonin, or it might be a raise in your dopamine, whatever. If that continues over a long enough period of time, because you have truly fallen in love and not just fallen in lust, then you will consistently drive behavior that creates what I call a conditioned response to that individual. When you see that person, when you smell them, when you taste them, when you touch them, it actually creates this immediate reward system and neurotransmitter pleasure and that is what trying to put the chemical basis to love is all about.

Advances: You have contrasted falling in love with somebody enjoying a hobby who says they just love it. How does that type of love differ from the emotional relationship style of love that you just described?

Dr Robertson: When you love a hobby or an object I do not think that all of the senses are involved and it is only unilateral. When I am participating in something and I love this activity, it is all related to the release of my neurotransmitters and it is not necessarily incorporating all of my senses into it. When I am interacting with an individual, I have a reciprocal response
back and it creates an interactive process. The whole concept of being able to consistently move your neurotransmitters through an interaction is much more rewarding than just participating in one way.

Now, you can get hooked on—I am an adrenaline junkie in a way and so I love doing things that are high energy, etc—perhaps you might call it a sort of passion for something, but it is very different because I do not have somebody coming back and changing my neurotransmitters and my emotional response to them. That 2-way street is what really creates true passion.

**Advances:** How, specifically, do imbalances in brain chemistry affect our relationships?

**Dr Robertson:** I think it is absolutely amazing. When I first started doing research, I thought perhaps our brain chemistry has an impact on our behavior. Today, there are over 25,000 people in a database and studies to support me when I say brain chemistry is the major determiner of behavior. What this means—and this is where medicine sometimes misses it—is that as brain chemistry is the major contributor to our behavior, and people think that brain chemistry is primarily altered with medication. We have done that by treating schizophrenia with certain psychotropics and depression with antidepressants and anxiety with anxiolytics, but the issue is that all of those drugs just change brain chemistry. The change in brain chemistry changes the behavior.

What we eat, what we do not eat; what we do, what we do not do; what we believe, what we do not believe; when we exercise, how frequently we exercise: All of that changes brain chemistry. The intermediary of all of this is our brain chemistry and how it drives our emotions and behaviors. But it is cyclical: Our emotions and behaviors drive our brain chemistry; our brain chemistry drives our behaviors and creates what I call Pavlovian or conditioned behaviors. When you look at relationships—let’s say that you have low serotonin. It is likely that there are behaviors that are fairly consistent with people of low serotonin. They judge themselves against the ultimate so they tend to feel like they always fail. If they behave nicely 90% of the time versus poorly 10% of the time, as all of us do have our bad days, they become what they are not. They focus on what they are not.

Now when they are in conflict, you can see an element of that in a relationship. If something goes wrong with a low serotonin person, they are going to blame themselves. I always laugh when I talk about brain chemistry and people of low serotonin. If they are throwing an outdoor barbecue and the weather is bad, they can take the weather personally. Everything is personal. Now in contrast you take a high dopamine person: They are the people who look at what I am and minimize what I am not—judging myself against the average so I am always feeling good about myself. What is really fascinating is that when things go wrong, they look externally for whose fault it was. They are outward directed.

Once more, low serotonin and high dopamine people attract each other. The negative part of that is when something goes wrong the high dopamine person wants to blame someone, while the low serotonin person takes the situation personally—they will accept the blame—and it can create some very interesting dynamics. A bunch of different brain chemical combinations can exist, making relationships very interesting from a purely biochemical standpoint.

**Advances:** What steps can be taken then to improve or to adjust these imbalances, thus allowing us to improve or rebuild relationships?

**Dr Robertson:** This is the part that has been so exciting for me. The first thing I think people need to know is what is out of balance or broken before they begin to fix it. It has always been my feeling that psychiatric medicine or behavioral medicine people start fixing things before they know what is broken. The first thing I want to know is what brain chemicals are likely out of balance, because of the 5 major brain chemicals there are 81 different combinations that we have seen. If you can identify the person’s biochemistry, then you can begin to prescribe activity, behavior, music, etc to be able to enhance their chemical imbalances.

Here is what I mean by that. I think the most bizarre thing in behavioral medicine—and part of what I talked about at the Personalized Lifestyle Medicine Conference—was that when we are out of balance, what feels good to us is what keeps us out of balance. If we are out of balance the exercise program we choose keeps us out of balance, the food choices keep us out of balance. You have to be able to stay away from the situation where “My program of health is based on me feeling good,” because we all know that what feels best to an alcoholic is drinking, what feels best to a controller is controlling, what feels best to a cocaine addict is cocaine. What each of those behaviors is doing affects brain chemistry and it is really an attempt to maintain their out-of-balance state.

One very sophisticated thing we have done is with regard to the biggest argument people have when I talk to them—the idea of identifying out of balance brain chemicals. Before they really understand the thrust of what we are trying to accomplish, they are always looking for the blood test or the procedure that tells me what brain chemicals are out of balance. This is the first thing that people look for. Here is the problem with that approach: There are no brain chemistry norms. If I am looking to find out what a normal serotonin level is, there is not one for comparison, and so what am I measuring? It is not like we have sodium or chloride or things where we can do blood tests. You can do assays such as testing urine to see if excesses exist, but it is harder to test when levels are minimal or low. Even with that result, it does not answer the question of whether you are out of balance—except at that exact moment.

I started down the path of looking at blood tests, urinary metabolites, cerebral spinal fluids, and all of that trying to find a solution and kept hitting a dead end. If I were to
induce my brain chemistry in my wife, it would drive her nuts; and if she adjusted me to hers I would probably be suicidal. I had to come back and reconsider what is optimal. What is very interesting about medicine is that, in practice, it really works in the same way. Optimal brain chemistry, to me, manifests as not having signs or symptoms of too little or too much. That is optimal.

What you have to do—and we created a computer technology that does the analysis—is ask the questions, the physiological questions, such as: Do you have twitching in the eye? A twitch in the eye means the ciliary muscle is very sensitive to dopamine, so I might consider an indication towards dopamine. If I say I am depressed, I might have low serotonin, low dopamine, low norepinephrine, or high GABA. But if I ask whether you have a history of compulsive disorders in your immediate family and the answer is “yes,” that’s more likely, based on research, to be much more related to low serotonin.

You can create this very sophisticated assessment of physiological signs and symptoms and then you come to what I call the hypothesis. It might say that the survey indicates low serotonin and high dopamine. That is your hypothesis. Now you can go to research and find that restricting short-branched chained amino acids may improve their serotonin. You can take a baseline serotonin reading and see if the level changes after supplementation. Or I could put a person on a treadmill and run them for 20 or 30 minutes, then do a draw to find out that there was an increase in tyrosine hydroxylase, which means they are going to turn over dopamine faster and essentially “burn up” their excess dopamine.

Because you have the hypothesis of what is out of balance through this survey, you now have science as an ally and you prescribe activity, foods, nutritional supplements, etc based on science. Just as in practicing medicine my diagnosis is really a hypothesis, it is the best guess of everything I compiled. I then use evidence-based medicine to prescribe the treatment for my diagnosis, or hypothesis. Then if the patient gets better, 1 or 2 things happened: Either (a) I was right with my hypothesis or diagnosis, or (b) it was because of the placebo effect. In behavioral medicine you frequently have a combination.

So how to change brain chemistry: For high dopamine I will probably prescribe short-burst exercises every other day, because if you do them every day you will retain endorphins, which are going to retain dopamine. I am going to tell you to watch out for the tyrosine-containing foods, such as red meats and certain nuts, and I might have you watch certain OTC products such as guarana, gotu kola, and taurine. I am going to want you to listen to music with a more consistent beat. On the other hand, if you have low serotonin I might want you to exercise 4 days in a row because I want to stimulate the postsynaptic serotonin reuptake receptor.

Ultimately, this is what personalized medicine is all about. I can tailor specific activity, diets, behaviors, music, etc. Our process has over 3600 different diets. Gender, pre-existing diseases, brain chemistry combination, existing level of activity: All of these determine what needs to be prescribed. It is really cool stuff. I mean, I still get really excited and I have been doing it forever.

**Advances**: So what led to your identification of personality types based on neurochemistry?

**Dr Robertson**: I have looked at it and identified 3 different axes that come under the realm of when a neurotransmitter becomes a neurohormone. The first axis is that I have a physiological reward center, which is a neurohormonal axis. We call it the physiological reward center—I use the term arousal—saying I love gas-pedal chemical and I love multitasking, so my brain likes activity. I am much more compliant with exercise than with diet. I might fall into the arousal category. Therefore if you want to stress me out, ask me to curl up by a fire and read a book, then ask me to do yoga. These would be stressful to me, so I am an arousal type. The flip side is the satiation axis where it says, “I hate anxiety, I like structure, I am more compliant with diet.” The first thing I do is use that axis that says where my reward center is and that shows me where a neurochemical is acting as a neurohormone. This means you prescribe change that a person will do, versus what they should do.

The second axis is based on what automatic behaviors are present. Another way of saying it is, “What are the stupid things I keep doing over and over again?” An example that is fascinating in the addiction field is that you do not find a person with only a cocaine addiction. You find a cocaine addict who is probably also risk-taking and sexually addicted. All of these are stimulating dopamine. When you take away the cocaine, the difficult thing is that you still maintain a lifestyle that is stimulating the same brain chemical and those people often become compulsive runners, which maintains that same release of dopamine.

I look at all of these behaviors, whether it is risk taking, whether it is controlling, or whether it is perfectionism, and I correlate those behaviors with what they are trying to do to the brain chemicals. We know controllers are trying to slow down neurotransmission; perfectionism is also trying to slow it down. Risk-taking is speeding it up. Now I have got these series of behaviors that I am going to call post-Pavlovian. The bell rings, which means the chemical gets out of balance and we do these things automatically.

The third axis is the neurotransmission baseline being slow or fast overall. With these 3 axes assessed, I can come back with a personality type. For example, if I have a slow transmission, all my behaviors are slow—and I am a satiation personality—what it says is that I am depressed, I do depressing things, and I like it. That is the personality type. I might be depressed and have slow transmission, but I am doing excitatory things—trying to compensate—but I am satiation so I am not getting a reward from it; that is another personality type. That combination of those 3 axes defines what I look at as your neurobehavioral personality.
Now what is really fun about this stuff is that this is the only technique that I am aware of that is pre-Pavlovian. Using myself as an example let’s discuss those 3 axes. I am arousal: The behaviors that I do when my dopamine gets high include tending to get more scattered, tending to be a little more impulsive, my listening skills go down, and I probably am a little bit hyper, so to speak. That is all dopamine-induced, so when my dopamine triggers, I do not have a choice on those behaviors. I cannot all of a sudden look at my wife when I am stressed and say, “I am going to focus and listen.” Cannot do it because those behaviors are post-Pavlovian. However, before my dopamine goes up, I know my ciliary muscle will twitch, my jaw tightens, my palms will get a little sweaty, and my heart rate will go up a little bit.

Those are what I call yellow flags that say, “If you ignore these signs and symptoms your dopamine will go up and you will automatically do these behaviors you don’t want to do.”

Guess what? That means cut back on the caffeine, cut back on the coffee, do not drink iced tea; go to pastas and get away from higher protein, high-affinity amino acids, such as tyrosine; go do a short-burst exercise. Then all those symptoms just go away. I have immediate feedback, but not on my behavior—this is a problem with behavioral medicine: It is always post-Pavlovian, so all I do is transfer from one to the other.

Staying with this concept, let’s say I am an alcoholic and I have low serotonin. Low serotonin triggers me to drink, although I say that I do not want to drink. So I go to Alcoholics Anonymous, or AA—but I still have a trigger. The goal is to stop the serotonin from inducing a trigger, and then I do not have to worry about what I am doing because I have done a pre-Pavlovian correction. This is where I moved into and we have outcome studies that are amazing.

I am saying that unless you can have an instantaneous feedback to a long-term problem, then you are stuck. So I may have obesity, but if I am just getting on a scale, I am not getting instantaneous feedback. But if my obesity is because I have low serotonin that is a biochemically induced, low serotonin, compulsive eater, then I know what I can do. It can be prescribed and I can get immediate feedback day after day, and you do not worry about the weight because it will go away.

My weight could also be due to being a high-anxiety, stress-induced eater with high dopamine, so I have a different program. Or I could be a genetically low-serotonin compulsive eater, but in a stressful situation, and I have a combination of high dopamine and low serotonin. All of those have different prescriptions to fix the brain chemical so that the behavior is not triggered.

**Advances:** You mentioned someone going to AA to address their addiction but still having the neurobehavioral trigger occur. Twelve-step programs have recently come under fire for what some consider to be archaic methods and generally acknowledged low success rates, but there really is not much else out in the mainstream at this point. In light of what you know, how would you reform addiction programs?

**Dr Robertson:** You probably know that I have written 10-plus books. My first book was called *Help Yourself: A Revolutionary Alternative Recovery Program* and it had to do with addiction. When I lecture, I frequently go after systems that keep repeating nonsuccess. So, the first thing I have to say is that I am a bit of a fan of the 12-step programs—but for a different reason. In the second chapter of my first book, I asked: “Why do we have to believe 12-step is effective when it does not have the outcome studies to support it?” There is a political element to that answer, but where I come from is very simple. Because of my personality, this is what is frustrating: how the 12-step programs work versus the 12-step philosophy. Do you understand the difference? The 12-step philosophy makes a lot of sense to me; it is just like Christianity makes a lot of sense to me but the way we practice it does not. Religion frustrates me, but biblical teaching is fascinating. In the same way, the teaching of the 12-step philosophy is fascinating, but how we do it is very interesting. Now you are going to hear a story of how I really got into this, outside of my fascination in trying to solve it.

When I came out of school, my first job was head of the pharmacy, the emergency room, radiology, and the laboratory section. People wondered, how in the world could I get in charge of that at my age? I said that my dad got me the job. They were in the process of building a 30-bed inpatient addiction facility at the hospital. When it got ready to open, the physician who was going to take over the board of directors came and said to me, “Wait a minute, you should be taking this over.” You have to remember that they had already hired 4 or 5 psychiatrists and/or psychologists. I was 27, and they were in their 40s. They all had addiction backgrounds—were addiction specialists.

We were sitting in the first treatment meeting and they said, “This guy is a 62-year-old alcoholic, been drinking a fifth a day for 40 years. The treatment program is 90 meetings in 90 days and here is his diet and exercise.” I looked at them and asked why they chose that. They said, “It is the most effective.” I said, “There is not anything effective about that. Why did you choose that?” My answer was a blank look. I said, “Okay, next patient.”

The next patient came in and she was a 22-year-old female—cocaine addict. Her treatment program was 90 meetings in 90 days, exercise, same thing. I asked, “Why did you give her that?” They said, “That is what is effective.” I said, “We already talked about it, it is not effective.” I said, “Here is the issue: You are telling people what they should do and you are not identifying (a) what is broken and (b) what they will do.”

I just looked at them and said, “If you ask me to go to an AA meeting, stand up, and talk about my failures, I will not go. If you ask me to sit down with a friend, one on one, I am as open as you can get.” I told them that one thing we were going to figure out was what people will do. I ended up writing the national treatment protocol for behavioral emergencies for EMS because of that whole concept of trying to figure out what is really working.
When it comes to the 12 steps, just saying that all addiction is taken care of by a 12-step program—I always say that everybody has a unique brain print and not everybody's brain print is going to work in that environment. Instead of telling them to keep going there and failing, we had better figure out how to know whether—I always call it predictive medicine—you are most likely to respond to that type of program or not. If the answer is yes, let's do it. If the answer is no, then do not create a problem. In my first book I asserted that addiction is not a disease of denial, it is a disease of hopelessness. The reason it is hopeless is because people who are addicted do not believe we know how to fix them, so therefore they are going to deny they have the disease. If we were successful people could easily walk in and say, “I have got a problem. Will you fix it?”

**Advances**: Please describe the term empowered health for me.

**Dr Robertson**: Empowered health says that people know about themselves, know what is going on, and are taking responsibility for their own health. Here is the problem: You have people who do not understand health being empowered. One of my sayings is “Empowering ignorance is really devastating.” When we empower—now you are going to hear my personalized medicine pitch—we do not empower them to understand a disease or about the brain, we empower them to understand their disease, or about their brain.

My mission is to make sure people know that everybody's cancer is different. Everybody's brain is different. Everybody's high cholesterol is there for different reasons. Empowerment to me means that I am going to give you the knowledge of why your condition is different than anyone else's, therefore you are not going to get caught up into all of the hype from all the different things that are claimed to be true because they are not pertinent to you.

You will notice that one of my companies has to do with artificial intelligence—we won Microsoft's health care nomination as best medical program of the year in 2005. Using the software, if a practitioner does not know enough to ask a question to get to a conclusion in health care—whether it's diagnosis or whatever—then the software needs to ask the question to make sure all the relevant information is collected. Practitioners have to be smart enough to know that what they have learned may not be enough to come to a conclusion. Using technology, the software can say, “Do not make a decision yet, because you need more information.” Once that information is there, now you know what's happening and you can make a better decision.

Of course, that is where traditional medicine gets caught. People will say, “I am depressed.” What does that mean? You are depressed? You are compulsive? You are a perfectionist? No, your diagnosis is low serotonin. But why is your serotonin low? Is it because your tryptophan hydroxylase is lazy or is it because your serotonin postsynaptic reuptake carrier protein is inefficient? What is off? What is broken? Once these questions are addressed, then you can empower fixing. If you empower by giving them the diagnosis of depression, treatment is all over the board. Do I take an antidepressant? Do I use this diet? Do I use this nutritional supplement? Do I do this? My pushing empowerment to the next level means you have got to know exactly what is going on with you. Now you are empowered.

**Advances**: That would explain why trials on holistic remedies give such a mixed bag of results, correct?

**Dr Robertson**: Absolutely, you just hit the nail on the head. I often find myself serving as the bridge between conservative medicine and alternative/holistic/functional medicine. Conservative medicine listens to me, I have a voice. Then you consider holistic health; we all know mainstream medicine does not accept it and the reason why is not because it lacks truth. For example, yoga was at one time considered alternative or holistic and now it is incorporated into mainstream treatments.

I start out with this philosophy—as you can imagine, talking to a functional medicine group and talking to the Harvard Medical School, you have 2 different perspectives here—I am going to challenge you to think differently. There are only 2 types of medicine: There is not alternative, there is not complementary, there is not integrated, there is not holistic. There is good and bad medicine.

Good medicine say that whatever it is—whether it is medication, whether it is a nutritional supplement, whether it is a form of thinking or philosophy—if you can tell me statistically who that is going to work on, and more importantly statistically for whom it will fail, then you have just given me good medicine. I do not care if it only works in one in a million people. But if you tell me there are no side effects, then the first thing I say is that there are no effects, because you cannot have an effect in the body without a response. And if you say it works for everything and everyone, then I am not buying it. That is where I come from and that is where I think I am very blessed to be able to reach both sides.

Right now, I am negotiating on a—for lack of a better term—holistic approach that would be reimbursed by health insurance. I get that attention because I am outcomes-based and science-based, etc. I know, depending on the audience, when I say that I am evidence-based, some question what that means. You have to understand, first of all, that there is no such thing as evidence-based medicine. We take a diagnosis, we do a treatment, and we say here is a statistical analysis for the diagnosis. The problem is that 7% to 20% are misdiagnosis, so you already have wrong information on your prediction. Thus, you have to break it down more—into outcome studies that do create evidence. I am always the person who asks the one more question nobody wants to hear asked, you know what I mean?

**Advances**: I can see how that has led to what could be considered a paradox, where the strong evidence, the data,
and the empirical rigor actually free you to be more of an artist and practitioner.

**Dr Robertson:** Right. We have the only database that I call 3-dimensional semantic. What that means is that, contrary to popular belief, all of our decisions are based on pulling in data and coming to a conclusion. I tried to think in terms of rows and columns, but every field is actually bell shaped. What that means is a particular finding may be highly significant for one person because you are black, because it is June, because you are in India—or wherever you live, because of your environment, because of your genetics, whatever. Or it could be really insignificant to another person because you are white, it is October, whatever.

All these variable factors come in and in theory the mathematical principle says that if I take a bunch of bell-shaped fields of data and put them together, there will be a single point that emerges as statistically evident. Most people just use the linear thinking. Their diagnosis is, “You have got nausea,” and that is it. I am diagnosing the nausea, but if you are in India nausea is going to lead to a GI disease more often, and if you have nausea and you live in America it is going to lead to flu more often. So what does that mean? Then you have to consider the season: It is nausea and it is June in India—well that means malaria is really going strong and that nausea is going to now switch away from indicating GI. That is the way that I think, which is, like you said, kind of artistic.

**Advances:** Related to empowered health, let's discuss the states of consciousness that you have mentioned before. How do these three states of consciousness interact to empower us regarding our health?

**Dr Robertson:** I look at 3 elements that are necessary for us to be empowered. The first one involves the question: Is what I believe to be true really true? Perceptions become truth in our minds and perceptions are not always accurate. Your perceptions are governed by your neurotransmitters. If I have high dopamine—and here is an example: If I have been stressed out at work and my dopamine shoots up, in reality what is happening is that I am getting a little bit insecure; you might call it loss of confidence.

Here is a little gem that I will throw in at this point: Treatment failure happens because I did not know enough about you to give you the right treatment, not because you did not follow it. That puts a lot of responsibility on a guy like me. **If you didn't get well, then I just did not know enough about you to get you there.** So, because of this failure, I am feeling insecure. I walk into my house, and although I have not screwed up yet, I am insecure as a father and I am insecure as a husband. Everything is governed by that perception. Our brain is so sophisticated—it knows perception as truth. The first thing that I say to empower people is that without a balance in brain chemistry, your perception and truth are not the same. You have got to get those aspects together so that perception is aligned with what is true.

The second element is found in the question: What do I believe should be true? This is governed by our social and environmental situations, our religious teaching, our pains and miseries, and our avoidance. All of these different things affect what I believe should be true.

One of the things that I used to do when my kids were young, which people would tell me that I was crazy for doing, was sitting down every once in a while at the dinner table, kicking back, and saying “Let me tell you about where dad screwed up. Let me tell you where I believed something to be true and it was totally false.” I wanted my kids to learn that in real life people screw up, they make mistakes, and you just move on. Yet, so many people coming from a hard-driving, highly successful parent think that they cannot make mistakes.

The third element comes after we examine what do I believe to be true and what do I believe should be true. Then, and only then, can I have an accurate, precise conclusion on being empowered as to what to do with it. I feel that we have to look at our perceptions, we have to look at our learning and our teaching, and our environment and our sociological situations, and then ask how legit that is. Only then are we empowered.

Bringing that into medicine, brain chemistry is one part and the second part has to do with genetics. For example, before I am even willing to work with somebody that has a disease—whether it is diabetes, obesity, or the combination—I need to know where the genetics fall. If all of your family members are 50 pounds overweight, for me to tell you that I am going to make you lean and mean is not realistic. It is not going to happen. That middle stage of discerning that what is true is that having you lose 10 pounds is the ultimate for you. I break weight gain into metabolic and biochemical aspects. For example, if your gain is biochemically induced, you might be able to lose all 50 pounds.

**Advances:** You recently made a short presentation entitled “One Size Fits One: Optimal Health Begins With a Properly Functioning Brain.” Please tell us about this concept.

**Dr Robertson:** We have a lot of cool things that we now know and techniques to use. We know a lot within functional medicine, we know a lot of genetics, and genomic studies are popular. We know a lot, but it is all scattered. All of this is great, but until we can apply it to a pinpoint—to a specific person, not a disease or drug—we will not get compliance.

In “one size fits one” I add a fourth dimension—of course, I do not believe they should be segmented but they are. We have mental health, we have spiritual health, we have physical health—there are going to be some of the diseases that we force into those categories—and the fourth one I have added is brain health. My brain affects my physical, affects my spiritual, affects my emotional, and vice versa.

Because we have left the brain health dimension out, we have not been able to tailor a specific event or a treatment that would allow compliance. From my standpoint, if I know which of the 81 combinations of brain chemicals you have,
what the personalities are, what the current common diseases are, and what the various elements that I can treat are, then I can pinpoint you—your treatment is likely unique and nobody else has it. It is your brain fingerprint aspect. All 4 dimensions are required for one size fits one.

**Advances:** When there is brain trauma or other physical damage to the brain, such as from alcohol consumption or some other toxic exposure, how is that going to affect brain function from a neurochemical or neurobehavioral standpoint? How do you look at treatment in that type of situation?

**Dr Robertson:** Before we even come to treatment, we look at 4 elements to determine why brain chemistry is out of balance. The first element is genetic, and in the term genetic we include something that may have happened at birth—it may not have an inherited component, but I was born with it. Spina bifida, for example: Usually your parents do not have it but you do. Genomics is really important here.

The second element is inherited. We assess backward 2 generations as much as possible. An example is that where I have blue eyes and my wife has brown eyes; we have 1 daughter who has brown eyes, 1 daughter has blue, and 1 daughter has green. You would wonder where the green eyes came from. It is because I am blue-eyed dominant and green-eyed recessive, while my wife is brown-eyed dominant and green-eyed recessive. However, 3 of the grandparents are green-eyed. You go back and look at what I am inheriting. That is what is fascinating, especially with serotonin because the postsynaptic serotonin reuptake carrier protein is likely or frequently affected and can create some brain chemical issues.

The third element is a term that I call *generational*. That means prior to the age of 7 years. This is a period of time our brain is undergoing tremendous development. Events that can affect this element include whether I have nurturing or not and whether I experience trauma. For example, parents divorcing to one child might cause anxiety or might cause oppression, yet to another child it is less stressful and less anxious.

You have to assess the individual situation—and this is where I think ADHD falls in—at that particular point in development if the brain does not have a time to reset we might contribute to the brain “learning ADHD” … let’s take a kid who goes to school, comes home, constantly watches video or computer games, the family really does not have a lot of family time, everything is fast food and fast moving, and finally goes to bed. He goes through life this way and then all of a sudden is diagnosed with ADHD. In reality, the brain has established a set point that says fast is physiologically normal, even though it may be psychologically uncomfortable. You have to assess that to find out what is going on, and that includes certain traumas and things of that nature in there.

The fourth element is an adult aspect that can change brain chemistry—whether there is a physiological trauma, whether there is a chemical trauma, or whether there is an emotional trauma. These will change it. We know, for example, if somebody inherited low serotonin and are in a lousy relationship, which you frequently see with children of alcoholics, they might have a lot of anxiety. So now they have got 2 brain-chemical issues: high dopamine from anxiety and low serotonin from compulsion, and you have to treat both. It is very important to assess those 4 different areas in order to build an effective one size fits one treatment plan.

**Advances:** So how does the medical profession have to adapt in order to put the concepts into practice?

**Dr Robertson:** This is a tough thing for practitioners to walk out with, but from the time I came out of school, I have believed that treatment failure is: “I don’t know enough about you to give you the right treatment” and that is what drives us to personalized medicine.

It is tough because when you accept that concept and someone does not get well, you walk out and say, “It is my fault.” I am comfortable enough, from my perspective, to say, “We, our profession, does not know. That is what is at fault.” I do not necessarily take it personally, although sometimes that is true.

I think that this whole element has been pushed out of our thought process because it is too painful when a person does not get better. So we call the treatment a failure or we view the patient as the failure. Yet, I do not think—regardless of what they say—I have never met an alcoholic that wants to be an alcoholic. I have really never met a depressed person who does not want to overcome it. Trust me, they get more rewards from being depressed than not, but there is still an element of “we don’t know.” I have never met somebody with high cholesterol, never met somebody with heart disease, that does not want to get better.

So then you ask, “Then why are they not exercising?” My answer to that is, “Because they are not getting a reward from it, that is why not.” Will I keep doing things that I do not get a reward from? No. So I have to figure out what their reward comes from. What will they get a reward from in order to move them to health?

You have to be very … ego comfortable, or you have to be a person who accepts that it is okay not to know. The whole profession of medicine is a practice and we are getting better; we know more today than we did yesterday. And so 10 years down the road I might have an answer, but I just do not have it now—and that is okay. I am doing my best.