ABSTRACT
Editor’s Introduction: Dr. Timothy P. White has served as chancellor of the California State University (CSU) system since late 2012. As chancellor, he oversees 23 campuses, over 460,000 students, and 47,000 faculty and staff. The CSU spans the entire state of California and has an annual budget of more than $5 billion. It is one of the most diverse and most affordable university systems in the country. In June 2015, members of the Editorial Board of The Journal of Transformative Leadership and Policy Studies (JTLPS) met with Chancellor White in Long Beach, California to engage on issues surrounding leadership, policy and transformational change across the largest four-year system of higher education in the United States. This reflective essay was culled from a transcribed interview and themed around six major areas: institutional vision, leadership, future of the California State University system, facilitating system level change, the CSU as a state-wide system with local flavors, and legacy foresight. The title to this reflective essay came from Chancellor’s White interview as he asserted that the official name of the university was California State University and that in a sense the apostrophe “s” as a possessive would ideally reflect that the system is California’s state university.

Institutional Vision
Editor’s Comments: One of the best definitions of a vision comes from the Oxford English Dictionary: “something seen vividly in the imagination, involving insight, foresight and wisdom. A vision is a desired future state.” JTLPS sought to inquire with Chancellor White his vision for the CSU system and how the values of high-quality, accessibility, student-centered education, and success efficiently and effectively advance this vision.

JTLPS: Our first question centers on vision. As you know, vision is about thinking ahead. It’s not concrete. It is in the abstract and includes foresight. Keeping in mind when storms and waves – the day-to-day particulars and politics – knock you off your path, you make corrections.
the vision of the system, where do you see the California State University as a system in five to ten years?

Chancellor White: Vision is an interesting word. Sometimes, I think of vision as clarity of purpose – a strong, focused sight-line towards the future. Other times, I think of it as keeping an eye toward the horizon, understanding that there are numerous paths and obstacles to overcome in reaching our goals. In my work at the California State University, I try to implement both of these ideas simultaneously.

I am persistently mindful of the responsibilities that this university has to the people of California, and – excuse the ship metaphor, but we are very close to the ocean here – to keep this public university on a steady course and to maximize the wind in our sails. That’s clarity. Identifying a clear path ahead, knowing what our strengths and weaknesses are and reaching port safely.

Then there’s the other type of vision – keeping an eye toward the horizon, even when you might not know what’s coming. It’s the long-term approach. Even if you can’t see what’s between you and your destination, we need to stay focused, continue to do the right things, and ingrain this institution with strong values, a solid work ethic and exemplary habits. When the winds change and blow you off course, you adjust accordingly. When storms and waves – the day-to-day particulars and politics – knock you off your path, you make corrections. Yet, you always stay focused on your goal and your mission. You maintain course toward that horizon.

An institution of this importance, of this complexity, of this size – requires a team to keep that ship pointed in the right direction. The entire university needs to stick to our shared goals and be steadfast in our mission even when that horizon is a bit ambiguous.

So keeping that horizon in mind… in five to ten years, I expect that we will reach those goals, and get more students to a quality degree sooner. As we achieve these goals, we will need to establish new ones – continuing to push toward that horizon.

JTLPS: A challenge within the system is that there exists a hybrid system in terms of governance and structure. It is both centralized and decentralized. What are the challenges that this brings to realizing the vision; even though we understand that maybe we will never get there (horizon)?

Chancellor White: That is a good question and one that I get asked all the time. Although I don’t think it’s necessarily the right question.

For me, the right question is not whether it ought to be centralized or decentralized. The question is, “How do we optimize this system using the best practices of a centralized and decentralized institution to maximize student success?”

An example is collective bargaining. Do we want to go through contract negotiations essentially 24 times – stretching out over long periods and taking a lot of hard work – to individually address each campus and the Chancellor’s Office? Probably not. It makes much more sense for both sides to use the system’s scale to our collective advantage.

I see the university as having advanced greatly towards the goals – attainable goals – set by our Graduation Initiative 2025. Meeting those graduation targets, hiring more tenure-track faculty, developing engaged advising, further solving the problem of course availability, and improving student preparation are critical components of our long-term vision.

We will also need to implement more high-impact practices, expand our ability to analyze data to make smart system-wide and individualized decisions, and bolster the pipeline of transfer students from our community colleges. If we can make major progress in five years, let alone reach – or hopefully, surpass – the goals we set in place for the Graduation Initiative 2025 in a decade, I’d be very, very happy.
negotiate individually for the services, resources and supplies that all 23 campuses use. Scotch tape is Scotch tape, whether you’re in Chico or San Bernardino.

The other side – I think this is where we really find that optimization sweet spot between centralized and decentralized – is in curriculum development. I would be the first to tell you that it doesn't make much sense to have a cookie-cutter approach to our curriculum.

Are we going to get a centralized group of faculty together to decide on the curriculum for the entire CSU? Or do we trust that Sonoma faculty members know the economic, environmental and social issues in Sonoma County? They are the experts who should design the curriculum on their campus.

At the same time, curriculum has to be related and relevant to comparable courses being offered across the California State University. Sonoma's courses should count the same as a similar course in San Diego, but San Diego will design and tailor their courses respective to their context. That’s where my office can provide some assistance and some background to our campuses to leverage our ability here in Long Beach to be a clearinghouse for information, for exemplary practices. From system-wide operations to campus curriculum development, leadership requires identifying what we’re ultimately trying to achieve and then determining the optimal way to achieve those goals in an efficient and effective manner.

Sometimes debates over critical issues get pretty muddy. That’s where you need conversations with everybody. I understand organizational charts. In my four decade career, I have seen a lot of them. It is important that you have them, but I think relationships trump organizational charts any day of the week.

Having relationships doesn’t mean we love each other. It doesn’t even mean we are going to agree with each other. But, we are going to have honest and respect-

**Leadership**

**Editor’s Note:** Leadership is a broad and evolving concept. At its most basic, leadership can be understood as a social process for generating the direction, alignment, and commitment needed for individuals to work together productively toward collective outcomes. JTLPS sought to elicit leadership practices that show promise in advancing the vision of the California State University as a system.

**JTLPS:** This leads to the next question on leadership. Once you establish the vision, how do you provide leadership to advance the vision or get closer to reaching the horizon?

**Chancellor White:** I’ve had success in my career as a result of making sure that the vision of the institution wasn’t only my vision, but rather had lots of owners and stakeholders. Even if it happened to be my idea, someone else may have drawn it out in more detail and articulated that vision better than I did. I don’t get to say, “I thought about that first, it’s mine.” Instead, I am going to say, “What a great idea! That’s brilliant. So how do we get there?”

When we have these discussions about our vision with the university’s stakeholders – students, faculty, staff, trustees, business leaders, legislators and thought leaders – they will often ask, “What are we trying to accomplish?” Every time, I want that discussion to lead to why we need to get more students to quality degrees sooner in California. I want people to own what we are trying to do here.

I think that’s a big part of leadership. It is building awareness of why this matters – creating opportunity for more Californians to earn quality degrees sooner – and why it is important and critical to the success of California as a society and as the seventh-largest economy in the world. It is about having conversations on why our mission really matters and understanding that we, as Californians, are all in this together.

Sometimes, when I meet a young student or immigrant family, that conversation focuses on my personal story and our shared experience. With business leaders, I usually ask them to tell me their business story. So I think that a big part of building relationships – and in turn, ex-

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ercising leadership – is in knowing and understanding a person’s story, finding commonalities and opportuni-

ties for collaboration, and then convincing whoever is in charge at the university, system or state level that this is what we are going to do, and here’s why it fits with our goals and our mission. And once we get that buy-in, it becomes a shared goal that the entire system and its stakeholders can support and rally around.

Leadership also means that, at the end of the day, we can put a stake in the ground and move forward. To be honest, the goals I have for the CSU are continually refined through conversation and constantly moving as our institution gains new ground.

JTLPS: What do you do when you set goals, when you communicate it and then you leave it to the campuses to decide how they are going to achieve these goals?

Chancellor White: Once we establish a shared goal, I want to be very up-front and clear on exactly what that goal means for our institution, and very loose on how we get there. For example, if I ask Sacramento, Monterey Bay and Los Angeles to reach out to students sooner and increase access, each campus will have the autonomy to figure out how to reach this goal. Their approaches, you’d imagine, would vary – particularly if you have some students grounded in privilege versus those coming out of poverty. I leave that to the campus leadership, faculty and staff, to the people who actually know the nuances at a contextual or personal level. However, with flexibility comes responsibility and accountability. We need to hold each other accountable for attaining those shared goals, even if we took differing paths to get there.

I will ask the presidents regularly, “How are we doing with the graduation rates?” If the rates aren’t where they should be, it is not about shaming the campus. It is about figuring out what got in the way and how we, as a system, can help the campus succeed because it matters to me, it matters to students and their families, and it matters to the future of California.

I’ve gained some perspective on this having worked in several systems, some small and some large. I worked at one of the eight campuses in the then Oregon system – a system that only encompassed higher education. In contrast, Idaho has one board for everybody from primary through doctoral education. Regardless of the structure, every campus I have worked at, someone would say, “What is the system office thinking? Those trustees, those regents! They just don’t understand our campus and what we are trying to do!”

It’s funny. Now I get here and I hear those comments, and I think, “Wait a minute. That’s me now! I am the guy that’s not supposed to get it.” Hearing that and understanding it from both sides – campus and system office – made me start to think about how to change the culture in this building and its reputation throughout the system. Whether it is accurate or not, a reputation is very real. My goal is to turn this office into a place that enables and facilitates success for all of our students, faculty and staff throughout the CSU.

This has been a very interesting conversation in the building that can get a little silly. You know, we don’t have a marching band, we don’t have a football team, and we don’t have students or faculty here. Maybe we should get a mascot. Yet, in all seriousness, what we do have here is a lot of great people that work every day on answering the question, “How do we enable success at our 23 campuses?”

We can enable success by moving from regulation and compliance to a stance that better enables and facilitates positive change. We are not there yet, but I think the senior leadership has it figured out and embraced this idea. I think that our people will continue to grow in this direction. In doing so, they will enable and facilitate success across the entire system. This, for me, is a very interesting and important work in progress.

Future of the California State University System

Editor’s Note: Though none of us can predict the future, a few crucial characteristics of organizations of the future are currently emerging. Organizations of the future will likely embody collaboration, partnerships, and alliances. They are likely to be increasingly transparent, will see the world as a community and create a flexible workplace. They are also likely to have greater inclusion. This section sought to identify practices that the California State University System is likely to include.
JTLPS: We like those words enable and facilitate. We will keep them in mind. This leads us to another question. What will the future look like for The California State University system in terms of collaboration and partnerships that could evolve into enabling and facilitating change across the system?

Chancellor White: First of all, we are in a revolution right now, or rather, an ecosystem shift. You could look at it from a whole host of perspectives, one having to do with what our families and students expect. There’s a lot of discussion about defining the value of going to school. What is the cost to the student, the cost to the taxpayer, the accountability, the future of that student’s career?

Then, there’s the expectations from elected officials. For a state university, they are in a way our most significant donors, so we are wise to pay attention to their thoughts and help to inform them of what we do, what our successes are, and what we need to do to improve. Business leaders’ voices also matter, as they are not only taxpayers in California, but often create the workplaces where our graduates seek employment. Then, of course, there are our employees. We have almost 50,000 faculty and staff and they want to be assured that their time with the university is suitable with a positive work and learning environment. They want to make sure that there are opportunities for career and personal advancement.

As you can see, there are all of those moving parts that are changing the ecosystem from a stakeholder perspective. On top of that is a technological perspective where more and more students interact and learn on internet-centered devices. This is both to their benefit and detriment. Regardless, it’s an ecosystem shift that we need to provide leadership for and address.

So how do we think about our creative educational work going forward where many students are coming to us as digital natives, while many of our students also come from low-income households with limited or irregular access to the internet and these amazing new technologies? That’s an interesting dichotomy. We are facing a situation of the haves and the have-nots and it’s our responsibility to make sure that we introduce and integrate more technology into the learning space without fostering exclusion.

That speaks to a larger question. How do we, approaching half a million students, never lose track that learning is inherently individualized? The way you learn, the skills and experiences students bring all play a role. Maybe a student has a learning disability. That’s intensely personal and it will affect how that student learns.

The objective must be personalized education at scale. At first, it sounds impossible, right? Common wisdom would suggest that you can either go to scale or you can localize and individualize learning. We are working on using our scale to personalize education, to understand the nuances and individualize it.

I know that when we solve that Rubik’s Cube, everyone will feel that we reached a major point of change that will affect higher education going forward. So this has been percolating in my head for a while: How can we use our scale, those big numbers, to find new ways to make learning and education very individualized and very personal?

How do we not let the standard of averages kill the learning environment for the individuals that make it up? That is the fundamental, intellectual and practical challenge. And you know that the CSU is up to this challenge because we pride ourselves on who we graduate and not on who we exclude.

JTLPS: Have you figured it out?

Chancellor White: I think we are making progress. This is where I have the greatest hope for technology. My context for this discussion comes from a research background in regenerative medicine. It was called muscle transplantation before, but today there is regenerative medicine and personalized medicine. I think a lot of the ideas from this research background carry over quite well to what we’re experiencing in higher education today.

Here’s an example. Let’s say we have two people, and they both have diabetes. We run their genetic screening and we treat one person this way and the other person that way, based on their screening. They get better. If we had treated both patients exactly the same based on a standard of averages, then possibly neither person would get better.

That’s the risk we have in this system. What do our college seniors do? Well, if we look at our 80,000 seniors, on average, they are doing X. That’s great to report to the
trustees, but we know that there isn’t a single member of that senior class that embodies the average. How do we not let the standard of averages kill the learning environment for the individuals that make it up? That is the fundamental, intellectual and practical challenge. And you know that the CSU is up to this challenge because we pride ourselves on who we graduate and not on who we exclude.

Sure, there will be those for whom the more traditional college experience isn’t for them. It’s okay to say, “This might not be right for you, let’s explore alternative options.” As long as somebody has the intellect and is willing to do the work, our goal should be – and is – to help that person reach their goals. That is where the individualization piece comes in. There are so many outside influences, factors, events and situations that will affect that student’s ability to reach their goals. If we can individualize the learning experience for them, in our ecosystem, then we will be successful. That’s the beauty of the CSU.

Facilitating System Level Change
Editor’s Note: Progress occurs when courageous, skillful leaders seize the opportunity to change things for the better. Change requires good management, but above all it requires effective leadership. The environment for change is different today for several reasons, including a connection of higher education to the global economy, greater public investment and sense of accountability, increasingly diverse students who engage campuses differently and the ever changing technology. JTLPS sought to inquire into the leadership practices that help align individuals and coordinate their actions for institutional change.

JTLPS: You described two major categories in terms of management practices and strategies that need to be instituted within the system to hold people accountable and promote a unified direction and vision. That’s one end. The other is leadership, empowerment and being open to change. You gave a lot of good examples along those two lines, but at the same time, there is a lot in between. There are multiple theories out there that talk about this: transformative, transformational, transactional, transcendental, servant leadership, leader-member exchange, and the list goes on. We understand that in order to function and to lead a system that is very complex, dynamic and challenging, you need a multiplicity of leadership approaches, particularly if you want to dare to engage in changing a system. It is hard enough to maintain it, let alone to infuse yourself in trying to change a system of this magnitude. Are there particular leadership practices that help promote systemic change across the university?

Chancellor White: Well, I think our time is up… [laughter]. Joking aside, as I talk about optimization, relationships and individualizing learning at scale, I think that is also true of the individual leaders at various levels of an organization. Oftentimes, leadership gets tied to a person’s title. I guess there is some merit to that, but I also believe heavily that there’s merit to informal leadership. Somebody that doesn’t have a particular title, but by the power of their intellect and their abilities and willingness to go beyond self, they become a leader.

These informal leaders help influence how students, faculty, staff and our stakeholders feel about something. I have always thought about leadership as not necessarily what the title is on your business card, but instead everything to do with how you build relationships, empower others to succeed and reach those shared goals.

Here’s a personal anecdote that helps explain my philosophy on this. It is not very intellectual, but it really helped define my outlook towards leadership and teamwork. I was a tall, skinny kid in high school and was late to mature. I also skipped a grade when I moved to the U.S. from Argentina via Canada, so I was also very young in my class. Long story short, when I was a freshman in high school, I was 5 feet 11 inches and 118 pounds. I really wanted to relate to the other guys, so I decided I would go and play football. The coaches, being jerks perhaps, said I ought to play tackle. I broke my arm within the first two weeks.

One of the assistant coaches took me to the hospital. As we sat there for a few hours waiting for my mom, he convinced me to go out for swimming. Fast forward to senior year, I was a pretty good swimmer in a non-contact sport. Basically, due to this experience with an educator and assistant coach, I decided to go to college at Diablo Valley and Fresno State in order to become a teacher and a coach.

I coached a high school age group and tried coaching at a junior college while getting my master’s degree at Cal State East Bay. I decided I wanted to coach at a four-year
college, but back then you needed to be on the faculty to be a coach. So, that’s when I decided to get involved in science and had that ‘ah-ha’ moment, and thought, “Whoa! This is interesting!”

Due in part to my initial desire to coach, I went back and did what I needed to do. I got my doctorate from UC Berkeley, essentially completing the path envisioned by the California Master Plan for Higher Education. Then I started working on a post-doc at the University of Michigan. Ultimately, I got my own lab as a professor, and it turns out that it was exactly the same thing as being a coach. What did I learn from my previous coaching experience?

• You get a group of people together;
• You work hard on the goal;
• You practice every day to succeed;
• You aspire to be successful;
• You maintain a strong work ethic and commitment;
• You learn how to manage failure.

Same thing in the lab. What are we going to study? Muscles. Here's how we'll do it. First, build a team of students and post-docs. Second, get grants to pay for it and surround ourselves with colleagues that will support our goals. Third, practice every day on transplantation or regeneration and develop a game plan. Fourth, aspire to be successful.

When I became a department chair, it was the same thing. Dean, same thing. Provost and campus president, same thing. When I became chancellor, guess what? Same thing. It is a goal. Day and night you stay on your goal, and if the goal becomes irrelevant, change and regroup so we can keep heading toward the horizon.

The way that I approach this is to take care of the job at the very top and take care of people along the way. If somebody needs some guidance or help, and if I can give it, I will. If they can't get it done, then I will make a change. This might mean moving people out who aren’t in the right place to do what California expects from us and what our society and economy need from this institution. I can't let someone in the wrong position hold us back in any meaningful way, but I am not the kind of leader who would say, “You're out of here, you're on your own, you're cut off.” I try to take care of the task as well as the person. For me, it just comes down to respect and dignity.

The CSU as a State-wide System with Local Flavors

Editor’s Note: The CSU is California's flagship higher educational system in terms of educating a significant percentage of its citizenry. In teacher preparation, for example, the CSU produces 60% of the teachers across the state. This is true of many other disciplines as well. Given the size of our state both geographically and in terms of our population, each campus in the system has both a “regional flavor” and also reflects core values and policies of the CSU as a system. This “identity” has been historically reflected in the names of the various campuses. San Jose State and San Francisco State have historically highlighted their local identity. In contrast, Sacramento’s name is still officially CSU Sacramento, a name that links it directly to the system. There are both historical as well as practical reasons for these differences. JTLPS sought to explore the leadership and/or policy initiatives that have mediated and even grappled with the dichotomy between regional needs and identities and those that cut across the university as a system.

JTLPS: The CSU has a lot of local flavors. What are either the leading educational policies or initiatives that tend to have a greater focus on the regional nature of the various campuses? How do you find balance? How do you grapple with the “local flavors” versus the system as a whole? How do you mediate this continuum?

Chancellor White: California is a patchwork state. We have six major metropolitan areas with populations above one million: Greater Los Angeles, the San Francisco Bay...
Area, San Diego, the Inland Empire, Sacramento and the Silicon Valley. But much of the state remains rural – made up of small communities with occasional mid-to-large cities like Fresno. This clearly affects decision making. For example, my recommendations to the trustees on appointing campus presidents is centered on candidates that hold a set of experiences, skills and a willingness to embrace and work within the context of regional communities.

I’ll use Humboldt State in Arcata as an example. The far northwestern part of California has a large Native American community that is very intertwined into the fabric of that region. Additionally, regional industry suffered over the last two decades due to changing environmental, water and fishing regulations. So, naturally, the needs for the people of that region are quite different from the urban centers I mentioned earlier. We need to embrace this so that the campus is relevant to its regional stakeholders, and thus its patch of the quilt that comprises California.

You don’t want to put a round peg through a square hole. It just won’t work for the community, the person or the campus. Yet, everybody benefits when you get it right. For example, we were lucky when we appointed Dr. Lisa Rossbacher to Humboldt State. She has lived in small towns like Arcata. She’s a geologist, which is a huge part of the academics there.

Another thing that public higher education has to be very mindful of, and that the CSU needs to continue to work on, is engaging alumni. We need alumni giving back either with their time or their talent. When you’re a student, your affinity is to your campus, not to the system. You don’t go, “Rah-rah for the CSU!” Remember, we don’t have a mascot at the system level.

However, we have done a tremendous amount of work in the last year to create an identity for the 3 million living alumni spread across this state, nation and – truly – the world. This system-wide affinity is critical to create opportunity for both our students and alumni. Also, this type of broad CSU affinity means that our alumni are able to serve as our ambassadors to policymakers, employers and community leaders. Along with our current students, alumni are the best representation of the quality of a CSU education.

Legacy Foresight

Editor’s Note: We know that “learning how to learn” or metacognition is one of the operative outcomes that an educated person in the 21st century must develop. This is true irrespective of academic field of endeavor. Even in the technical fields a graduate must learn how to learn. Thus, one of the goals of higher education is to provide and promote learning as a life-long process. Our legacy as educators will reflect this goal. JTLPS sought to learn what policies and leadership practices allow this vision for the system. How is “learning how to learn” enacted across the system so that our students develop this requisite outcome and they become life-long learners?

JTLPS: We would lastly like to focus on the legacy question. What will be your legacy for the system in five to ten years?

Chancellor White: I hope that it encompasses students first, students last, and students all the time. That’s a personal belief that I know I share with a lot of other people. Students first requires a university leadership that is aligned with the student-focused goals of the campus community. That requires leadership to be thoughtful and engaged in our communications.

For example, I have been working on creating a more concrete outline of what my expectations are for the meeting held every other month with presidents and vice chancellors. Nothing drives me crazier than having a good meeting on a difficult topic and then you say, “Any other thoughts?” Nobody raises them, because everyone is distracted or unengaged. So I’ve sort of implemented the “Ted Rule.” Ted (Theodore Ralph “Ted” Kulongoski) was the elected governor at the time when I was at Oregon State. He was a very nice, approachable kind of guy. The way he campaigned was to go to mom-and-pop restaurants and he always wore a bowling shirt, probably polyester.

Yet, Ted told me that if someone’s cell phone went off when the governor’s cabinet gathered in Salem for the weekly meeting, then that person would be off of the cabinet. This was around 1999 or 2000 when cell phones were just starting to get ubiquitous, so he just wanted everyone to turn them off. His reasoning was that when you gather once a week, everyone – the cabinet secretaries, directors, attorney general – had to focus on the work at hand. Two months into his term as governor, somebody’s phone went off. Ted walked the person out and said, “We won’t be needing you in this administration.” He was dead serious. I haven’t walked anyone out yet, but you turn everything off when you come into the council meetings. Because I want everybody to listen to each other. Because
a person cannot learn without being thoughtful and engaged.

So my legacy? I hope that it is one focused on empowering learning opportunities for student success through engaged and thoughtful leadership. I hope I’m remembered for enabling and facilitating positive change and good work for this institution. Maybe that I’ve encouraged a common goal of strong communication, robust accountability, and high expectations.

I also hope that when my time here is over, that Californians by and large grow their understanding and respect of the critical importance of this university and its mission to serve the public good, because they built it. They own it. It really is California’s State University.

About Chancellor White

Chancellor White is the seventh chancellor to serve as head of the CSU system. Previously, he served as chancellor of the University of California, Riverside, and as a professor of biology and biomedical sciences. Chancellor White came to UC Riverside in 2008 after serving as the University of Idaho’s president from 2004-2008. Chancellor White served Oregon State University from 1996-2004 as a dean, the provost, and executive vice president, and with an interim appointment as president. He previously held positions as professor and chair of the Department of Human Biodynamics at the University of California, Berkeley (1991-96), and as professor and chair of the Department of Movement Science and research scientist in the Institute of Gerontology at the University of Michigan.

Chancellor White was born in Argentina. He and his parents immigrated to Canada and then to California when he was young. Chancellor White pursued his higher education from Diablo Valley Community College, Fresno State, California State University, East Bay, and his PhD from the University of California, Berkeley. He spent two years as a post-doctoral scholar in physiology at the University of Michigan before starting his academic career at Ann Arbor in 1978. He is internationally recognized for his research in muscle plasticity, injury, and aging.