

Helen Lavretsky: Translational neuroscience of integrative medicine

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Professor Helen Lavretsky, a pioneering force in geriatric psychiatry and integrative medicine at the University of California, Los Angeles (UCLA)'s Departments of Psychiatry and Biobehavioral Sciences, has fundamentally reshaped our understanding of brain health and aging. Her groundbreaking research connecting mind-body interventions with neurobiological mechanisms has transformed skepticism into scientific acceptance, establishing new paradigms in mental health care. As director of research for the UCLA's Integrative Medicine Collaborative and Late-life Mood, Stress and Wellness Research Program, she has led seminal studies on novel therapeutic combinations for treatment-resistant depression and cognitive disorders. Her work, recognized by "triple crown" honors from major psychiatric associations in 2020, spans from innovative psychopharmacology to pioneering investigations in yoga and Tai Chi for mental health. A dedicated mentor who has championed women and underrepresented minorities in science for over 25 years, Professor Lavretsky currently serves as President of the American Association for Geriatric Psychiatry (2022–25), and she is on the Advisory Research Council to the National Center of Complementary and Integrative Medicine. In her engaging Genomic Press Interview, Professor Lavretsky shares insights from her remarkable journey from a young medical student to becoming a leading voice in integrative psychiatry, offering a compelling glimpse into the future of personalized mental health care.

Part 1: Helen Lavretsky – Life and Career

Could you give us a glimpse into your personal history, emphasizing the pivotal moments that first kindled your passion for science?

I grew up in Ukraine and Russia in a family of academic physicians, my mother was and still is a psychiatrist and a psychopharmacologist at the age of 89, and my father was a neurologist and a clinical pharmacologist. My great-aunt and great-uncle were prominent psychiatrists in Moscow, Russia. From an early age, I was obsessed with understanding brain-behavior relationships and started working in a psychiatric hospital at 15 years of age. I started medical school at 17 and immediately joined a medical students' research interest group for psychiatry. By the 4th year, I conducted my first study of psychiatric symptoms in women with gynecological cancers that won a prize at the Medical Student Research Conference and was published. This started my research career, which was initially focused on the neurobiology of late-life mood and cognitive disorders of aging. Once I moved to the USA in 1989, I pursued training in geriatric psychiatry and neuroscience with the help of the National VA Neuroscience Fellowship, which helped me gain all the necessary skills in neuroimaging. The next step was to learn skills in conducting pharmacological trials of depression and cognitive disorders in older adults. The early grants from the Brain and Behavior Foundation (then known as the



Figure 1. Helen Lavretsky, MD, MS, University of California, Los Angeles, USA.

NARSAD) and a Mentored K23 award from the National Institute of Mental Health (NIMH) afforded me protected time to learn the next level of research skills to launch my independent career in developing novel clinical interventions for treatment-resistant depression and cognitive impairment in older adults and stressed caregiver with the use of cutting edge biomarkers to characterize neurobiological mechanisms of response to these interventions using neuroimaging, genetic, and immune biomarkers. I conducted some of the seminal trials of the methylphenidate and memantine combinations with antidepressants that uncovered neuroplastic and anti-inflammatory mechanisms of drug response. My efforts at the time were recognized with early career awards from the American Association for Geriatric Psychiatry, and recognition of my research was placed in the top 10 in psychiatry by the *New England Journal of Medicine* in 2015. I also loved mentoring junior researchers and students and spent the next nearly 20 years in mentoring with the support of sequential





K24 Research Career Development awards from the National Institute of Mental Health (NIMH) and the National Center for Complementary and Integrative Health (NCCIH).

We would like to know more about your career trajectory leading up to your most relevant leadership role. What defining moments channeled you toward that leadership responsibility?

The professional organization that became my professional home is the American Association for Geriatric Psychiatry. I am grateful to the numerous teachers and mentors whom I met through that organization, who have promoted my career and contributed to my success. I am a graduate of its research mentoring network that was funded by the NIMH—the Summer Research Institute (PI-Dilip Jeste) and the Advanced Research Institute (PI-Martha Bruce). Later, I became one of the devoted mentors for these networks for the next 20 years and wanted to contribute to the AAGP via my service as a Chair of the Research Committee, a Board member, and finally, as President-elect, President, and immediate past President (2022–25). I was grateful for the opportunity to provide my vision for the field of geriatric mental health and contribute to many successes of the organization, including the Brain Health Summit that was held in 2023. The AAGP treated me well and recognized my contributions by awarding me with the Member-in-Training (1997), Junior Investigator award (2002), and Senior Investigator award (2020). To date, I am the only one to receive this honor and recognition, but I am sure that our talented young researchers will catch up soon. There are a few other organizations that I consider “home” that contributed to my career trajectory and success, like the American College of Neuropsychopharmacology and the American Psychiatric Association, American College of Psychiatrist that elected me as a Distinguished Fellow (APA, AAGP) and a Fellow (ACNP and ACP). In 2020 – I received “a triple crown” of awards for my contributions to the understanding of the mechanisms of resilience in older adults from the APA (Jack Weinberg Award in Geriatric Psychiatry), ACP (Research in Geriatric Psychiatry), and AAGP (Senior Scientist Award) – all Awards for Research and Career in Geriatric Psychiatry. The same year, I received the Best Research Mentor award from my own Department of Psychiatry at the University of California, Los Angeles (UCLA). It felt good to have been recognized for the intense, focused climb up the academic ladder during a very scary time of the world closing under the pandemic threat. I even wrote “A Scientific Biography of the Spiritual Seeker in the Year of Hindsight 20/20” to commemorate the confluence of events and this abundance of recognition that was published in the American Journal of Geriatric Psychiatry. Another professional family is the Editorial Board of “Psychiatric Times” on which I have served for nearly 20 years and contributed many publications on my favorite topics of geriatric psychopharmacology, integrative medicine, Long-COVID and many others that trained many junior colleagues to write educational papers.

Please share with us what initially piqued your interest in your favorite area of research or professional focus

Twenty years ago, through my practice of yoga as a stress reduction tool that improved my health, I put my attention on designing research studies of mind-body interactions and applied everything I learned before investigating the mechanisms of response to the mind-body and lifestyle interventions. Some of the studies of yoga and Tai Chi became groundbreaking and set a new trend in research and clinical practice that emphasized whole person health and prevention potential of using integrative medicine. I became one of the leading voices promoting lifestyle and integrative psychiatry and promoting translational neuroscience of integrative medicine in psychiatry, which is finally getting traction with mainstream psychiatry. I served as a Co-Chair of the International Congress of Integrative Medicine in 2018 and currently serve on the Advisory Research Council of the National Center of Complementary and Integrative Medicine. I have contributed as an editor of the issues of the Psychiatric Times devoted to Complementary and Integrative Psychiatry and developed annual programs for the Caucus on Complementary and Integrative Psychiatry for the American Psychiatric Association. I worked

across organizations supporting lifestyle medicine and brain health— such as AARP, the American Heart Association, and the American College of Neuropsychopharmacology. I have published the book *Resilience and Aging: Research and Practice*, edited *Complementary and Integrative Therapies for Mental Health and Aging*, and co-edited *Convergence Mental Health: A Transdisciplinary Approach to Innovation* and have contributed to numerous textbooks and reviews of the field of integrative medicine relevant to psychiatry and geriatrics.

What kind of impact do you hope to achieve in your field through your focus on your specific research topics?

I hope that the field of psychiatry and mental health will open from a strict disease and acute-care-oriented field of medicine to embrace brain health-oriented prevention for neuropsychiatric disorders. As a geriatric psychiatrist, I know well that aging starts at conception when social determinants of health and other risk factors start dictating the future trajectories of health that eventually lead to late-life neuropsychiatric disorders, but public awareness does not rise to recognize this until it is too late. Nobody thinks about aging or dying in their youth. Nothing happens to the brain or the body on the 65th birthday of an older adult. All the effects are cumulative and stem from poor lifestyle habits, head injuries in childhood and young adulthood, environmental toxic exposures, and prolonged stress and trauma exposures starting in utero and throughout childhood and young adulthood that are left untreated for too long. What is needed is a broad public educational campaign about preventive strategies and the importance of lifestyle factors (physical and mental activities, sleep, stress reduction, social connections; healthy diet and adequate nutrition, environmental safety) and attention to prevention of head traumas and depression, cardiovascular risk factor reduction (blood pressure, cholesterol, obesity, blood glucose control). If we all do all of those things, as a society, we will be healthier and live longer and with healthier brains. As psychiatrists, we are more likely to spend time in prevention and stress reduction than in an acute hospital setting.

What habits and values did you develop during your academic studies or subsequent postdoctoral experiences that you uphold within your own research environment?

I learned that everyone deserves a chance to try to succeed, but only some will. Perseverance and belief in yourself are essential to your success. Others may tell you that you do not deserve success, and they may deny your originality and inner quest for truth. But there are others who will support and promote you who need to find. Knowing the rules of engagement in academic and research environments is essential, but following your dreams and convictions is also important in your path to success. Opening the door to students, trainees, and other colleagues will greatly enrich your journey. My work has become very collaborative across departments, institutions, and fields. I enjoy working with many colleagues and trainees from diverse backgrounds.

At Genomic Press, we prioritize fostering research endeavors based solely on their inherent merit, uninfluenced by geography or the researchers' personal or demographic traits. Are there particular cultural facets within the scientific community that warrant transformative scrutiny, or is there a cause within science that deeply stirs your passions?

I have chosen to mentor women and underrepresented minorities during the past 25 years because I perceived the great need. Over time, I have witnessed a significant increase in women entering biomedical research who no longer feel excluded. We are still struggling with identifying talented physician-scientists from underrepresented backgrounds and fostering their leadership roles to create role models for all.

What do you most enjoy in your capacity as an academic or research leader?

I have witnessed the broadening and deepening of public and academic interest in integrative medicine and health. I was present at the



Figure 2. A tranquil autumn scene in Northern Idaho, where Professor Lavretsky finds respite and spiritual renewal. The image captures a rocky mountain stream bed with large volcanic boulders reflecting in still pools, framed by golden aspens and evergreen conifers against a backdrop of forested mountains and clear blue sky. This natural setting serves as a meditation and retreat space where she connects with nature between academic deadlines.

beginning of this movement when yoga or meditation was laughed at and frowned upon. I was told that I am interested in “weird things,” and my yoga studies were rejected by the Institutional Review Board (IRB) review. My research has been important in changing this perception and providing evidence for the broad use of mind-body interventions for neuropsychiatric disorders of aging and understanding the neurobiology of response. I am happy that this field is becoming more nuanced and complex. I also enjoy mentoring young scientists and trainees, some transitioning into leadership roles over time. I feel responsible for ensuring their success.

Outside professional confines, how do you prefer to allocate your leisure moments, or conversely, in what manner would you envision spending these moments given a choice?

I have a peaceful cabin in Northern Idaho, a retreat to de-stress and find my center after stressful grant deadlines (see [Figure 2](#)). I like meditating, hiking, communing with nature, birds and animals, and swimming in lakes. I have two granddaughters and love to travel and spend time with them. I enjoy writing, playing piano, painting, and dancing; otherwise, I find joy through my work. Keeping our balance supports our bodies and minds. As I get older, I am also aware of the fleeting time and the need to enjoy all I can before it is all over.

Part 2: Helen Lavretsky – Selected questions from the Proust Questionnaire¹

What is your idea of perfect happiness?

Me, granddaughters, beach, swimming, dancing, sunset, great family dinners, the smell of tropical flowers, dolphins. Pure Joy. And peace.

¹In the late nineteenth century, various questionnaires were a popular diversion designed to discover new things about old friends. What is now known as the 35-question Proust Questionnaire became famous after Marcel Proust's answers to these questions were found and published posthumously. Proust answered the questions twice, at ages 14 and 20. In 2003 Proust's handwritten answers were auctioned off for \$130,000. Multiple other historical and contemporary figures have answered the Proust Questionnaire, including among others Karl Marx, Oscar Wilde, Arthur Conan Doyle, Fernando Pessoa, Stéphane Mallarmé, Paul Cézanne, Vladimir Nabokov, Kazuo Ishiguro, Catherine Deneuve, Sophia Loren, Gina Lollobrigida, Gloria Steinem, Pelé, Valentino, Yoko Ono, Elton John, Martin Scorsese, Pedro Almodóvar, Richard Branson, Jimmy Carter, David Chang, Spike Lee, Hugh Jackman, and Zendaya. The Proust Questionnaire is often used to interview celebrities: the idea is that by answering these questions, an individual will reveal his or her true nature. We have condensed the Proust Questionnaire by reducing the number of questions and slightly rewording some. These curated questions provide insights into the individual's inner world, ranging from notions of happiness and fear to aspirations and inspirations.

**Which living person do you most admire?**

I have great admiration for President Jimmy Carter, who lived a long life with a great sense of purpose and integrity. Rosalynn Carter was his much admirable partner.

What is your greatest extravagance?

Massage and bodyworks- keeps me going.

What are you most proud of?

My vision for geriatric mental health and integrative psychiatry has come true through my efforts and ability to inspire others.

What is the quality you most admire in people?

Open-mindedness and open-heartedness.

What is the trait you most dislike in people?

Superficiality.

What do you consider the most overrated virtue?

Being a "team player." It does not guarantee anything.

What is your favorite intellectual activity?

Writing—grants, scientific papers, books, memoirs, and blogs. That is how I create my reality: first putting it on paper, then manifesting it into the "physical." I feel the rhythm of the words, and they flow through me; it becomes more like creating music.

Where would you most like to live?

My tastes have changed throughout my life. I was a "city girl" who needed yoga studios, Starbucks, shoe stores, and Opera. Now, I just crave peace and quiet in nature.

What is your most treasured possession?

My collection of rocks and crystals- I am very much into gemology and the spiritual nature of things.

When and where were you happiest? And why were so happy then?

I wanted to freeze time when my son was young, but I was too stressed out by my career/family imbalance and felt guilty all the time because my career demanded a lot of my time and attention away from raising my son. I am the happiest now when I do not have to struggle or climb that academic ladder with a vengeance. I still long for more balance in life and work, but my life is still defined by deadlines.

What is your current state of mind?

Calm, smiling at the chaos, curious about what the future will bring, hopeful for joy.

What is your most marked characteristic?

My self-determination, resilience, and persistence have been keys to my success.

Among your talents, which one gives you a competitive edge?

My intuition about selected research direction, my originality, and my ability to convince others to collaborate have given me a competitive edge in business.

What do you consider your greatest achievement?

Succeeding in the business of neuroscience of integrative medicine, when it was viewed as "fringe," and seeing it move to the popular topic in medical education and healthcare while feeling pride for participating in this shift.

If you could change one thing about yourself, what would it be?

The need to take care of others.

What do you most value in your friends?

Inspiration.

Who are your favorite writers?

Margaret Atwood and Agatha Christie both had an incredible literary longevity that kept everybody guessing.

Who is your hero of fiction?

Alice Kingsleigh (Alice in Wonderland) who kept following her heart, inquisitive mind, and the white rabbit.

Who are your heroes in real life?

Those who sacrifice their lives for the idea of freedom.

What aphorism or motto best encapsulates your life philosophy?

Shakespeare wrote: "To thine own self be true" (Hamlet, Act 1, Scene 3). My personal version is "Stay true to yourself and do what brings you joy." This has worked for me in my life, work, and mentoring others.

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