AMCANA Andhra Medical College Alumni of North America

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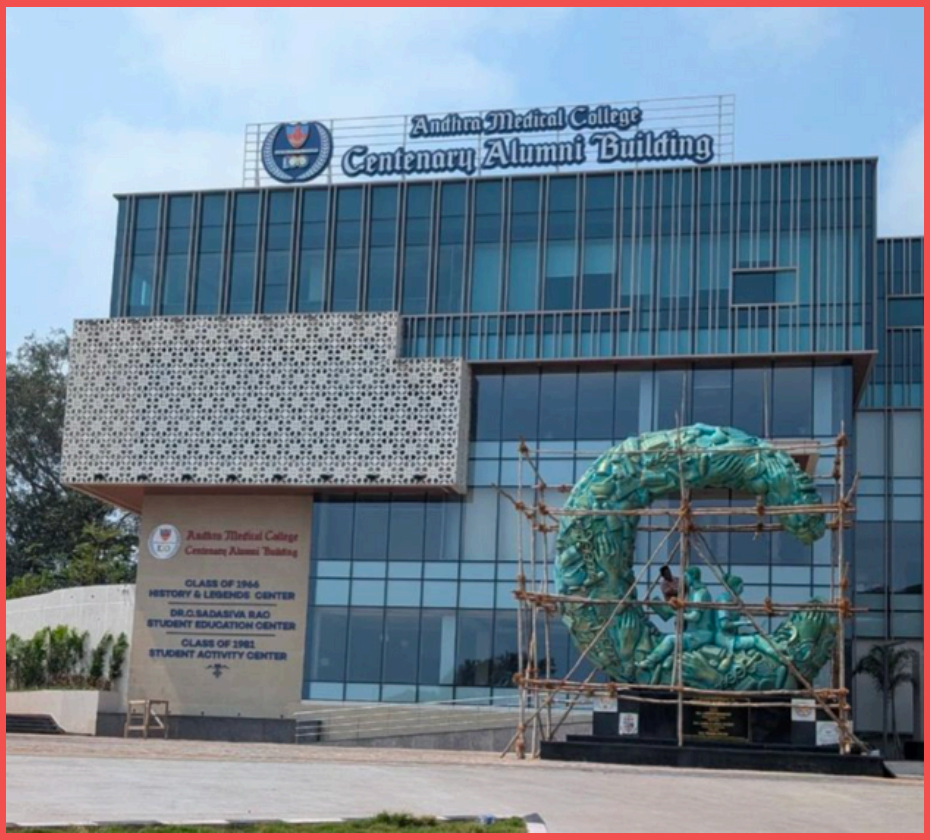
NEWSLETTER



AMCANA President's Message

I wish you all a very Happy New Year and a Happy Ugadi. It's really an exciting time for Andhra Medical College. The CAB building is getting the final touches and soon it will be open for student activities.

The past glory of research is going to come back to AMC, with a few generous donors' commitment, a research block will be built on AMC campus. We will continue the service to the AMC, as the saying goes, you can never pay back to the Mother and Mother land.

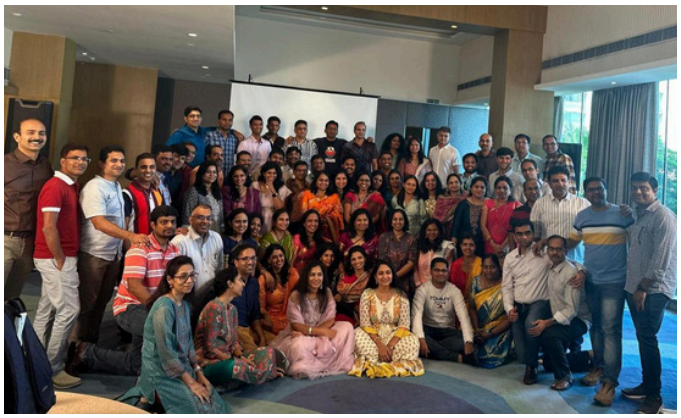
-Manikyam Mutyala MD

1987 Batch

NEWS AND EVENTS

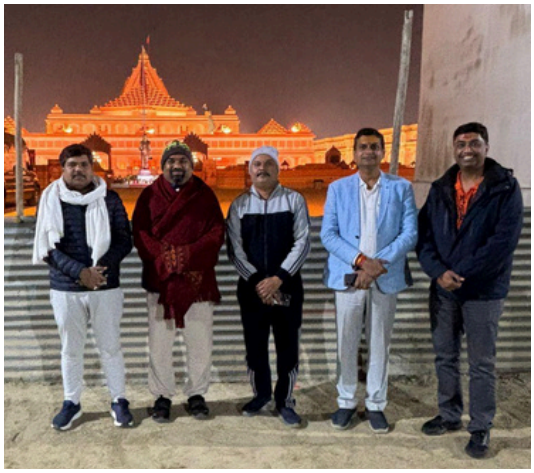
Andhra Medical College (1991 Batch) - 33 Years Reunion in Goa

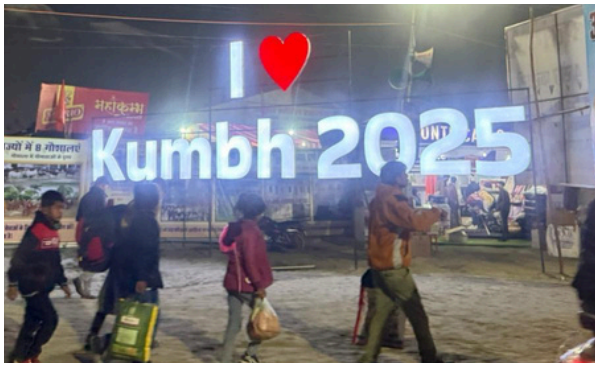
Andhra Medical College 1998 Batch Reunion



Andhra Medical College 1990 Batch Reunion March 23rd, Srikakulam

Andhra Medical College Alumni Attending Maha Kumbh





INTEGRATIVE MEDICINE CONCEPTS AND APPLICATIONS

Vijayalakshmi Voruganti, MD

1981 Batch

In the following months it is my intention to share some insights into the world of alternative medicine and how it differs from conventional medicine in its approach to diagnosis and therapy. I will endeavor to cite scientific articles where they exist, but nowhere is the art of medicine more applicable than in the field of complementary and alternative medicine.

This article focuses on presenting the basic concepts that exist in a holistic medical approach. Specifically, the systems biology approach to the human body – otherwise termed Endobiogeny^1. History tells us that over the centuries, philosophy, science, culture and medicine were strongly intertwined and each informed the other of what is and what is possible. The last 500 years have seen dramatic change with devolution from this holism into reductionist thinking where Medicine became the study of organs, then cells, then genetics and subcellular elements. Also, part of this "naive reductionism" was the thinking that the true role and effect of each part requires study in isolation of each variable, to eliminate bias. And that such understanding can be extrapolated to the entire body, which is merely a collection of such parts. The patient has been lost in this therapeutic approach, while the discovery of novel cellular targets and genetic targets has - resulted in targeted therapies to reverse symptoms, but this has not always allowed for cure from the disease. In the last 50 years, we have seen a shift back, where science has recognized the multifactorial nature of disease, and there is a growing consensus that the body functions like a system and not a collection of isolated parts^2

> **"A living system, such as the human body, is self-generating, cohesive, closed unto itself but open to interaction with its environment."**

A system is a collection of parts that form a whole. A living system, such as the human body, is self-generating, cohesive, closed unto itself but open to interaction with its environment. It is essential to understand that the functioning of such a system can occur at different levels – the individual units of activity in and of themselves, their relationship to each another, the global functionality of the system, and the system's relationship to the environment. This interrelationship where each unit of activity depends on, influences and is influenced by the activity of other units is key to understanding human physiology in health and disease.

Advances in cellular biology have demonstrated how at every level – cell, tissue, organ and organism – the human being meets the criteria of being a system. The therapeutic approach in a systems analysis is based not on control, but on the modification of physiology, on supporting the reengagement of endogenous mechanisms of management rather than a permanent substitutive one. Plainly stated, the approach endeavors to work with the intelligence within the system and support the system's ability to restore order rather than using therapies that permanently handicap the system. An example of the former would be the use of herbs that support various physiological processes and allow the body to recover its natural state versus the use of extraneous hormones or medicines that the body can no longer do without (such as an antidepressant, acid reducing medication or hormone replacement).

In Endobiogeny, we study the **terrain** of the individual – the potential structure and the functional expression of such a structure that is unique in each of us. This terrain determines **metabolism**, which is defined as "the sum of all factors that allow the organism to create, maintain, repair and renew its structural elements and to constantly adapt the functionality of such elements and calibrate its adaptive capabilities in ceaseless change." The neuroendocrine system is the manager of this terrain and includes the autonomic nervous system as its calibrator and the various hypothalamic-pituitary-organ derived hormones in linear relationships (vertical, horizontal and radial) as the components. It is beyond the scope of this article to discuss these relationships and hormones in detail, but the introduction of these concepts was necessary to further delineate how therapeutic targets are chosen.

In summary, in Endobiogeny, every disorder, be it physiologic, physical, mental, or emotional, directly or indirectly implicates a certain level of endocrine dysfunction. Let's see a practical example of how this approach differs from conventional medicine.

Ceaseless change is the only constant in life. The origin of disease is the resistance to what is and to such change that then results in the corresponding responses of implosion, stagnation or explosion that are the human being's programmed responses based on their perception (that in turn is defined by their past experiences, i.e., past interaction with their environment) and the state of their physical reserve, that determines their capacity to adapt and select the appropriate adaptive response.

Let's take the General Adaptation syndrome. In conventional medicine this is otherwise known as the Selye-

Syndrome, and describes the nonspecific response that the body experiences in response to chronic stress. The word 'stress' is used in physics to refer to the interaction between a force and the resistance to counter that force, and it was Hans Selye who first incorporated this term into the medical lexicon to describe the "nonspecific response of the body to any demand ". Selye recognized that his discovery was an expression of Claude Bernard's milieu intérieur and homeostasis at work and cleverly linked the hypothalamic-pituitary-adrenal axis to the way the body coped with stress. Selye's proposal stipulated that stress was present in an individual throughout the entire period of exposure to a nonspecific demand. He distinguished acute stress from the total response to chronically applied stressors, terming the latter condition 'general adaptation syndrome', which is also known in the literature as Selye's Syndrome^3. The syndrome divides the total response from stress into three phases: the alarm reaction, the stage of resistance and the stage of exhaustion. When individuals are exposed to a stressor, they are first taken off guard, then attempt to maintain homeostasis by resisting the change, and eventually fall victim to exhaustion in countering the stressor. Stress is a choreographed state of events, not a mere psychological term, and is encountered by all individuals during a period of illness. It differs fundamentally from the fight-or-flight or acute stress response that occurs when facing a perceived threat, as first described by physiologist Walter Cannon in 1915. The acute release of neurotransmitters from the sympathetic and central nervous systems, as well as hormones from the adrenal cortex and medulla, pituitary and other endocrine glands, mediate the response in acute stress. This is accepted by conventional medicine and from Selye's work the importance of the corticotropic axis is recognized in stress and underpins the therapeutic use of stress dose steroids in the management of illness.

Endobiogeny recognizes that this phenomenon of the Selye syndrome is merely one portion of a much more comprehensive immediate adaptation response. Adaptation here is classified into Immediate, short-term adaptation, chronic adaptation, general adaptation, chronobiological adaptation and adaptability. through the role of the different components within the human body such as the autonomic nervous system with its two sympathetic axes ($\alpha\Sigma$ and $\beta\Sigma$) and the parasympathetic axis ($\pi\Sigma$), the buffering system (the splanchnic circulation, Liver, innate immunity), the endocrine axes (adrenal cortex, thyroid, exocrine and endocrine pancreas) etc. to name a few.

Why is this important? The human organism goes through several major transformations from its initial materialization until the time of death or dissolution. Each evolution is sequential and anticipated, preparing the organism for a subsequent phase of function. Such cycles of evolution that

occur in 7–10 year intervals are often overlooked in conventional medicine save the major ones of puberty and gonadopause. These solicit different adaptation responses to facilitate the necessary change in structure and function. In contrast, living in a constantly changing environment requires different adaptation responses that install the well-recognized circadian rhythms and allow the organism to adapt to diurnal and seasonal changes.

A truly integrated and holistic approach to health would consider all these factors and the use of phytotherapy or plant derived materials allows one to have far more tools at their disposal to help their patient stay ahead of potential pitfalls in health. More on that in the next article.

1. K Hedayat, JC Lapraz. The Theory of Endobiogeny , Volumes 1-3. Academic Press, 2019.
2. Hood L, Rowen J, et al. Systems biology at the institute for Systems biology. Brief Funct Genomic Proteomic
2008; 7(4):239-248
3. S Y Tan, A Yip. Hans Selye (1907–1982): Founder of the stress theory. Singapore Med Journ. 2018 Apr; 59(4):170–171.

AMC Hiking Expediton

SRIKANTH PENUMETSA MD

1997 BATCH

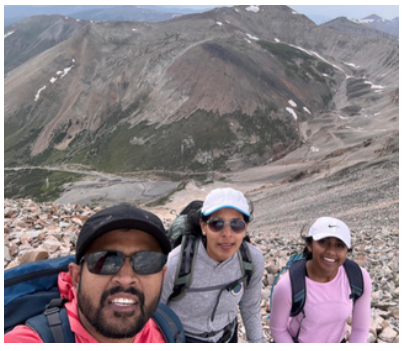
Having grown up in Vizag, I'm no stranger to hills. During my high school years, hiking up and down a hill behind our house in Seethammadhara was a regular activity. However, hiking a 14er (a mountain over 14,000 feet) is an entirely different experience. I hadn't climbed a mountain since high school, and I had no plans to do so until 2021, when our local hiking group organized a trip to Mt. Whitney, the tallest 14er in the continental U.S. One of my friends managed to convince me to join, and since then, it's become a wonderful addiction—one of the few good ones.

Colorado is a hiker's paradise, home to around fifty-two 14ers and hundreds of 13ers, each offering unique views of nature's beauty. Climbing a 14er is tough, requiring both physical and mental preparation to ensure safety and success. The muscle fatigue and intense shortness of breath from the low oxygen levels at these altitudes will make you question your sanity. But reaching the summit brings such immense joy and a sense of accomplishment that it makes all the pain worthwhile. Hiking downhill presents its own challenges, testing both mental and physical endurance. Yet, by the end of each hike, my first thought is always, "When's the next one, and should we try an even tougher mountain?"

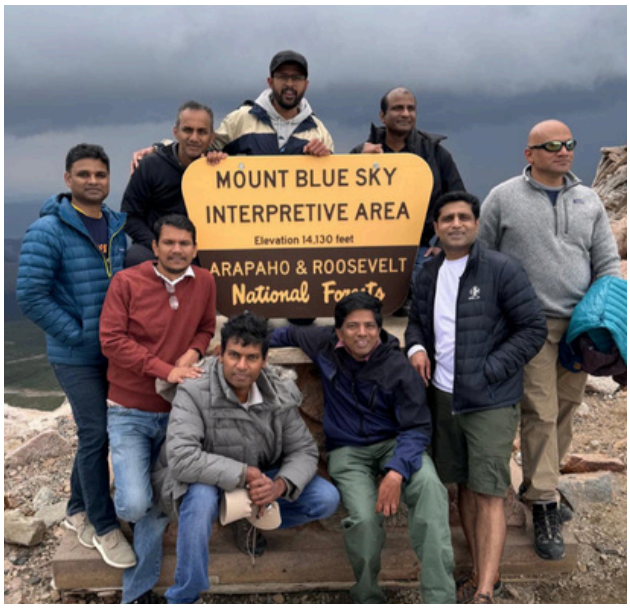
The Prep Work: Our 25-year college reunion in 2023 was an unforgettable experience. We all felt the desire to stay connected, and I thought hiking with my college friends would be a great way to achieve that. Our local hiking group decided to attempt "DeCaLiBron" as our annual hike in 2024. I invited my college friends, and soon, a group of alumni from the 1994, 1997, and 1988 batches joined. This marked the birth of the "AMC Hiking Group."

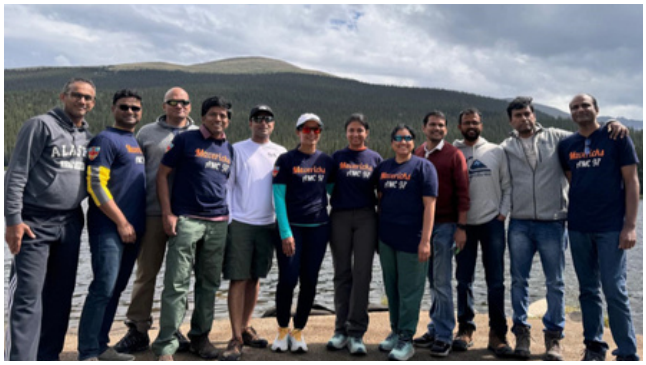
For many in the group, it was their first high-altitude hike. While excitement filled the air, there was also a fair amount of apprehension about what could go wrong. The discussions in our WhatsApp group about exercise regimens and weekly progress kept us all engaged in the months leading up to the hike. Organizing an activity like this was no easy task, but reflecting on the experience, I'm proud of how well our group worked together to successfully participate in the 14er hike, without any injuries or mishaps.

The Prep Hike: We chose Mt. Sherman, a 14er, for our prep hike. Unfortunately, with many of us experiencing intense nausea and vomiting from altitude sickness due to insufficient acclimatization, we couldn't go past 13,500 feet. A storm was also approaching, and we didn't want to risk staying on the mountain during it. It is extremely dangerous to stay on these mountains during storms due to risk of lightning strikes that can be very dangerous. Although we were disappointed with this minor setback, spending the night at Fairplay and Alma, Colorado—at around 10,000 feet—helped us better acclimate to the altitude and everyone recovered by the next morning.

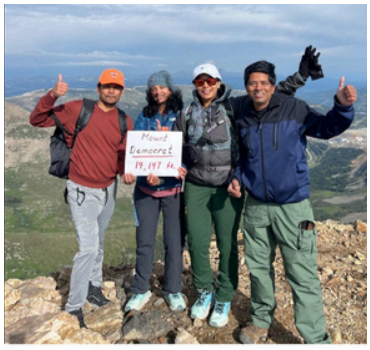


The Scenic Ride to Mt. Blue Sky: The next day everyone woke with much rejuvenated enthusiasm as everyone's health recovered. Next up was the drive up to the summit of Mt. Evans, now called Mt. Blue Sky. This route is very beautiful with breath taking views of the mountain ranges and the valleys. It gives us a glimpse of the magnanimity of mother earth and also reminds us of our responsibility in safe guarding it. The joy of connecting with nature in its purest form is hard to describe, but it's something everyone should experience at least once in their lifetime.

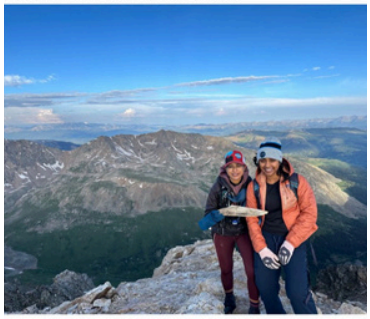


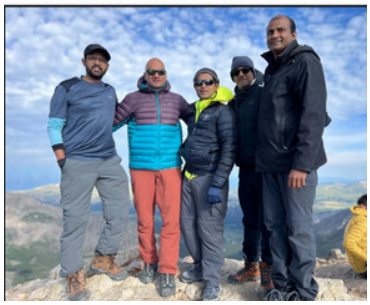


The Big Hike: The big day finally arrived. We reached the trailhead at 5 AM on a cool morning to begin our hike. DeCaLiBron is no easy feat. It's a loop of four 14ers: Mt. Democrat, Mt. Cameron, Mt. Lincoln, and Mt. Bross. The first section, Mt. Democrat, was perhaps the most challenging, with rocky terrain that tested our endurance. Yet, everyone in the group endured all the challenges, physical and mental and managed to summit the mountain. A few of us went on to complete the almost 8 mile loop.


Summit of Mt. Democrat


Hiking Mt. Democrat






AMC – 88 Hikers

Overall, it was an incredible experience that we all thoroughly enjoyed. We're already looking forward to more AMC alumni hikes in the future.

Residents and Fellows Corner

Shashank Kraleti, MD
1998 Batch

Hello, residents and fellows! Welcome to the inaugural resident and fellow column in the AMCANA newsletter. Here we will be discussing interesting topics relevant to your training and future practice.

As physicians, we have a significant impact on people and their lives. Our role is sacred, involving immense trust and requiring a great deal of sensitivity and compassion as patients invite us into the whole range of their experiences. You are training to be part of this noble and sacred profession.

A lot has changed in the scope of practice in medicine during the past 75 years. Information in medicine is now doubling every 73 days compared to every 50 years in 1950, when patients and physicians lived in the same neighborhoods. It was easier to understand and be aware of the social determinants of health and their impact on people's health outcomes. Now, most often, patients and physicians live in different communities—and sometimes in communities far from each other. (Think virtual visits.) The scope of practice in medicine is getting narrower by the day as we specialize. Work hours have dropped. Duty hours have come into effect. Spectrum of disease is also changing—from greater infections to more chronic disease, cancer, and lifestyle-based health conditions. People's daily lives are leading to ill-health instead of well-being. As residents and fellows, you are now required to learn computer and other technologies, billing and coding, clinical documentation, electronic medical records, and other areas outside of medicine.

That said, nothing fundamental has changed in terms of what makes a physician successful: kindness, humility, and professionalism. These three apply universally, but they are especially critical in the practice of medicine.

Understand the "why." Don't judge. Be curious as you go about your work. Ask good questions. People's histories—their stories—help to determine their current beliefs and behaviors. Genetics or environmental factors (or both) are often at play in people's day-to-day actions and the health conditions they experience. People sometimes have limited choices to do things differently. Be flexible in mind and spirit. Meet patients where they are and where they want to be. Don't hesitate to learn, to change, and to grow. Let patients change you as you seek to orient and guide them toward the well-being they seek.

Take care of yourself: eat healthy, live healthy, and stay healthy. You deserve a good quality of life, too. Maintain a healthy balance: between compassion for others and for yourself; between time you spend on others and on you; between how much you spend and how much you save (money is important, but money management is more important); between stress about things that you care about and time for play, relaxation, and rest. Remember that you don't get to decide everything. You only propose and recommend, helping to empower your patients to make the choices that will realize the change they want to experience in their lives. Stay happy, healthy and be content.

We are living through an era of rapid change in medicine just like several other professions including technology. Trust your gut as you navigate the changes ahead. Those who find ways to accommodate the change all around us will be poised to thrive and to help others do so, too. Don't be afraid. You have a community of support.

Thank you for the opportunity to engage with you all through this section of the newsletter. Please suggest topics to discuss in this section and feel free to share any suggestions with our editorial team. We hope and aspire to bring several fascinating topics to you through this column and look forward to our journey together.

STARS OF AMC

DR. RAMANI RAO

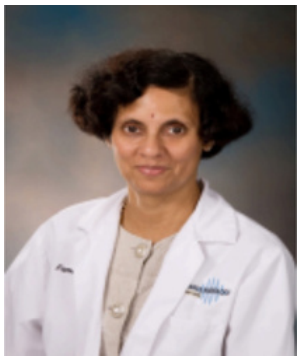
AMC 1969 Batch

"You have power over your mind, not outside events. Realize this and you will find strength."

- MARCUS AURELIUS
(A ROMAN EMPEROR AND STOIC PHILOSOPHER)

A woman of discipline, diligence, and grace, Dr. Ramani Rao chose for herself, a medical specialty that suited her the best, Radiology. She is a retired diagnostic radiologist with an impressive career spanning over 40 years. She gained recognition for her expertise in advanced imaging techniques, including CT, MRI, Ultrasound, Neuroradiology, and Mammography, and became a respected member of the radiology community. She taught at Mount Sinai Medical Center, Downstate Medical Center in New York, and Beth Israel Medical Center in New Jersey. Ramani provided exceptional patient care throughout her career, combining her technical skills with a compassionate approach. She worked in various settings, including hospitals and outpatient imaging centers, and was known for her meticulous attention to detail and commitment to accuracy in diagnostic interpretations.

Dr. Ramani hails from Vizianagaram where she had her schooling. She joined Andhra Medical College in 1969. After obtaining her MBBS, she moved to the United States in 1977 and pursued her passion for radiology. She completed her residency in Diagnostic Radiology at Beth Israel Medical Center, New Jersey in 1982 and her Neuroradiology Fellowship at Mount Sinai Medical Center, New York in 1983. Subsequently, she practiced in academic settings before joining private practice in Rochester, New York.



Dr. Ramani Rao

Dr. Ramani was passionate about Screening Mammography to help women with early diagnosis of breast cancer. Her commitment to education extended beyond her practice, as she participated in community outreach programs designed to emphasize the importance of preventive health and early diagnosis.

She has many talents and her discipline and diligence keep her active in her hobbies. She is an expert in crocheting, needlepoint, and yoga. Over the last decade, she has been coached by a personal trainer in professional ballroom dance, along with her husband, a retired engineer, Madhava Rao.

They participated in numerous competitions and won several awards. Not surprisingly, she is quite agile and nimble. To this day, she still actively takes part in professional ballroom dance programs.

Ramani is passionate about continuing her journey of lifelong learning through travel and cultural exploration. To keep her mind and body in shape, she participates daily in senior citizen activities at the local YMCA in Rochester, New York.

She is blessed with two children and three granddaughters. She resides in the picturesque Finger Lakes Region of Upstate New York with her husband, where she enjoys an active lifestyle.

Dr. Ramani Rao and Dr. Madhava Rao

-Seshu Sarma MD
1969 Batch

A collection of Ramani's crochet creations and her ballroom competition pictures