

ABOVE and RIGHT: Kattesh

Katti's breakthrough research in the fields of environmentally friendly nanomedicine and nanotechnology have made him a global expert in Ayurvedic medicine. He credits his teachers, mentors from India, Germany, Canada and the United States, as well as his colleagues and family, as crucial to his success.

BY DIAMOND DIXON

Kattesh Katti: India's Person of the Year

Radiology and physics professor recognized for decades of work with green nanotechnologies

attesh Katti, PhD, stepped foot on the University of Missouri campus 26 years ago, eager and excited for the opportunity to apply his knowledge of chemistry to medicine. Now, the Indianborn scientist is the Curators' Professor of Radiology and Physics, director of the MU Institute of Green Nanotechnology and Margaret Proctor Mulligan Distinguished Professor of Medical Research at the School of Medicine. He most recently was named the 2016 Person of the Year in Science by *Vijayavani*, the leading daily newspaper in his former home state of Karnataka.

What sets Katti apart from most scientists in the Western world is his ability to merge the traditional Indian holistic medicine of Ayurveda with the science of green nanotechnology. According to the National Institutes of Health, Ayurvedic medicine, which originated in India, is one of the world's oldest medical systems and uses herbal compounds, special diets and other unique health practices to combat the spread of certain diseases.

"My latest recognition by *Vijayavani* validates the quality of interdisciplinary translational medical research being carried out at MU," Katti said. "This will help advance nano-Ayurvedic medicine products to applications that can be used to cure and treat patients across the world."

Katti has dedicated his career to discovering new ways to use gold



nanoparticles and "green" technologies such as phytochemicals from tea, soy, cinnamon, and other common herbs and fruits, as nontoxic alternatives to treating cancer, arthritis and other debilitating diseases.

While Katti has spent decades conducting research to prove green technologies are a non-toxic alternative to treating cancer, his journey recently became more personal when his mother was diagnosed with an inoperable tumor.

"Being named Person of Year in Science is a bittersweet moment for me as my own mother, who instilled the values of truthfulness and dedication and always saw in me the firepower to rise to the top, has been suffering now from an inoperable tumor," Katti said. "I dedicate this award to my mother, my hero, as she has shaped my life and career."

There is global excitement about Katti's new approach to holistic medicine: Several countries, including Australia, Brazil, Germany, India, Indonesia, the Netherlands, Singapore and more, have recognized him for his pioneering efforts.

One of Katti's research collaborators, C.M. Joshi, M.D., consulting physician at the Specialty Ayurveda Clinic in Karnataka, India, said Katti's green-nanotechnology research provides a scientific justification to Ayurvedic medicine. Joshi is working with Katti to bring nano-Ayurvedic medicine products to clinics in India.

Katti's future research plans include transitioning from using nano-Ayurvedic treatment methods on small and large animals to human patients in India. "We already have compelling data from small and large animals that our approach of nano-Ayurvedic medicine through green nanotechnology works highly effectively in treating tumors and other diseases in animals," Katti said. "We are now collaborating with specialist Ayurvedic medicine doctors in India to initiate clinical trials in human patients."

Anantkumar Hegde, a member of the Indian Parliament, said Katti's approach to holistic medicine through green nanotechnology is unprecedented because it is poised to create a renaissance of nano-Ayurvedic medicine across the world.

"On behalf of my countrymen, I extend my heartfelt congratulations to professor Katti for all of his accomplishments," Hegde said. "I recognized his tremendous scientific potential almost 15 years ago. I am not surprised that he has won, and continues to win, awards of scientific excellence from almost every nation on this planet."

Katti also recently received a highly competitive RMIT Foundation Fellowship Award from RMIT University in Melbourne, Australia. RMIT is a global university of technology, design and enterprise. This honor allows Katti to travel to Australia to spend two weeks at the university collaborating with RMIT administrators, faculty and students.

"After listening to a recent invited lecture delivered by Dr. Katti at our institution, it was clear to me that he takes a rigorous scientific approach to green nanotechnology," said Evelyn Tiffany-Castiglioni, professor and head of the

Department of Veterinary Integrative Biosciences at Texas A&M University in College Station, Texas. "He is testing toxicity and biological activity with appropriate methods, doses and controls. His work has promise to significantly advance holistic medicine. I very much look forward to collaborating with him in this emerging field."

Now, 26 years after accepting the faculty position at MU and tireless efforts to increase awareness of his nano-Ayurvedic approach, Katti says there is a unique opportunity to make MU an epicenter of excellence in holistic, nano-Ayurvedic medicine.

"The best is yet to come," Katti said. "We are on the cusp of creating a renaissance of nano-Ayurvedic medicine through our scientific discoveries in green nanotechnology to save millions of lives across the world."



www.medicine.missouri.edu to learn more about Kattesh Katti's research.