



**XIII Latin-American Congress of Artificial Organs and Biomaterials**  
**XXI Congress of Latin American Society of Artificial Organs (XXI LASAO)**  
**August 26-29<sup>th</sup> | Rio de Janeiro, Brazil**

## **Pre-Conference Tutorial and Training Course on Green Nanotechnology**

### **Overview:**

This Pre-Conference tutorial and training session addresses advances in the applications of Green Nanotechnology in the development of nano-biomaterials.

Detailed description and analysis of the intervention of green nanotechnology to produce biocompatible nanoparticles for molecular imaging, therapeutic, and biomaterials applications will form a focal point of this training program and tutorial. Specifically, phytochemicals derived from a plethora of herbs, fruits, and various plant species possess innate abilities to bind to receptor proteins on a vast variety of normal/tumor cells. Electron-rich phytochemicals provide a rich source of energetic electrons to transform metals into Bionanomaterials. This training course/tutorial will explore the fundamental science and technology of naturally available phytochemicals and their utility through green nanotechnology to produce molecular imaging and therapeutic products.

Due to the rapid degradation of phytochemicals in vivo, the utility of receptor protein-specific phytochemicals as molecular/anatomic imaging probes has largely remained unexplored. This tutorial will address the latest advances in improving the bioavailability of phytochemicals through green nanotechnology and thus provide state-of-the-art knowledge and training to design the next generation of biomaterials, nanoparticle-based imaging agents, and theranostic probes derived from receptor-specific phytochemicals.

### **Benefits:**

The course/tutorial will feature hands-on training and formal education on the implications of green nanotechnology in biomaterials science, molecular imaging, and therapy. This tutorial/course is of significant benefit to scientists, engineers, clinicians, students, and professionals in biomaterials research, as well as professionals in molecular imaging and therapy from industry and academia.

Personal Q&A time with Professor Kattesh V. Katti—During and at Coffee/Tea breaks and correspondence after the course via email.

[Professor Kattesh Katti's invention for treating COVID-19, through Nanotechnology, was featured by the National Academy of Inventors](#)

For his groundbreaking discoveries in Nanotechnology, Green Nanotechnology and Nanomedicine, Dr. Katti has been awarded several international awards, recognitions and citations, which include: 2024: Global Fulbright Specialist in Green Nanotechnology by the US Department of State; 2023: Elected to the American Institute for Medical and Biological Engineering (AIMBE) College of Fellows: Official announcement cites: "With your election into the College Fellows of AIMBE, you will become a Fellow of AIMBE medical and biological engineers that includes Nobel laureates, Presidential Medal winners and members of the National Academies. Less than 2% of medical practitioners and biomedical engineers are elected to this highly coveted National Academy...." United Nations/IAEA's recognition as the Global Expert in 'Green Nanotechnology' and in 'Nano-Radiopharmaceuticals'. Dr. Katti is the first immigrant American, of Indian Origin, to win the 'Outstanding Missourian Award'—the highest award from the State of Missouri, USA, conferred by the Governor of the State of Missouri. He is a Professor of the European Union in Green Nanotechnology, and a Winner of the 2016 'Person of the Year in Science' award. Dr. Katti was selected for this coveted award for his pioneering research in Green Nanotechnology with applications to Nanomedicine. Dr. Katti has won the

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International Hevesy Medal Award (2015)—A Global award for excellence in Nuclear Sciences and Nuclear Medicine—regarded as equivalent to a Nobel Prize in Nuclear Sciences; Elected to the fellowship of the National Academy of Inventors (NAI in 2015) recognizing the discovery of ‘Katti Peptides’—a group of peptides used in biomedical sciences and nanomedicine product development. Dr. Katti is an elected fellow of the American Association for the Advancement of Science (AAAS). Dr. Katti represents the United States of America at the United Nations IAEA (2015-2022)—a program on Nano Radiopharmaceuticals—with 22 member nations’ research and development program at the International Atomic Energy Agency (IAEA) in Vienna, Austria. In recognitions of his groundbreaking discoveries of radioactive gold nanoparticles in cancer therapy with implications in theranostics and plethora of original research in SPECT imaging, Dr. Katti has been recognized as One of the ‘25 Most Influential Scientists In Molecular Imaging in the World’ by RT Image. Dr. Katti has received the ‘Father of Green Nanotechnology’ citation by the Nobel Prize Winner Norman Borlaug and has been bestowed with the Gauss Professorship—Hall of Fame—from the Gottingen Academy of Sciences. Dr. Katti is the first immigrant American to win the ‘Outstanding Missourian Award’—the highest civilian award from the Governor of the State of Missouri. Dr. Katti has won the ‘Outstanding Scientists Fellows’ award and inducted as a Fellow of the St Louis Academy of Science—one of the oldest scientific academies of the world and many more. His discoveries of the production of various nanomaterials through ‘Zero Carbon Emission’ processes and his cancer treatment approaches through Nanomedicine and Green Nanotechnology have been highlighted in Nature, Future Medicine, in Science (AAAS), in Popular Science, and by the Discovery Channel. and in the scientific/medical programs of the British Broadcasting Company (BBC), Discovery Channel and the Voice of America. Dr. Katti has published over 300 publications, reviews, and book chapters and is the principal inventor on over 150 inventions and over 50 patents. He has delivered over 500 Inaugural/Plenary/Invited lectures in 25 countries. Dr. Katti is the chief editor, editorial board member or member of advisory boards of several internationally reputed peer reviewed scientific journals.

[Latest news releases](#): Hear Dr. Katti explain his gold-based nanomedicine.

[Nanomedicine Through Green Nanotechnology: Preclinical and Clinical Investigations](#)

[Father of Green Medical Nanotechnology Featured in the Latest Episode of From Campus to Commerce](#)

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About Professor Kattesh V. Katti, M.Sc.Ed, PhD, DSC, FRSC, FNAI, FAIMB

<http://katteshkatti.com/>

Green Nanotechnology Course Coordinator

Globally recognized as the ‘**Father of Green Nanotechnology**’, Professor Kattesh V. Katti, MSc Ed, PhD, DSc, FRSC, FNAI, FAIMB—Curators’ Professor of Radiology, Director, Institute of Green Nanotechnology, within the Medical School, University of Missouri, Columbia, USA—is internationally renowned as a leader in the interconnecting fields of—chemistry, Materials Science, Radiopharmaceutical Sciences, Nanotechnology/Green Nanotechnology and Nanomedicine—for biomedical applications, specifically for Molecular Imaging and Therapy of living subjects. Dr. Katti is a pioneer in the field of **Nano-Ayurvedic Medicine**—a new medical modality which he has discovered by the application of Nuclear Analytical, Radiochemical techniques, and Green Nanotechnology to Ayurvedic-Holistic Medicine. In 2024, the US/European Union Patents and Trademarks office granted the first-ever US patent on Dr. Katti’s discovery of a new medical modality referred to as ‘Nano-Ayurvedic Medicine.’ Several cancer therapy products, bionanomaterials, and antibiotics, discovered by Dr. Katti, are currently used in treating human patients. For his groundbreaking discoveries in SPECT/PET imaging and radiopharmaceuticals sciences, **Dr. Katti has won the International Hevesy Medal Award—A Global award for excellence in Nuclear Medicine**, regarded as equivalent to a **Nobel Prize** in Nuclear Sciences. A strong contender for a future Nobel Prize, Dr. Katti’s groundbreaking research in Green Nanotechnology has direct implications in a myriad of fields, including Health Care, Cosmeceuticals, Adaptive Clothing, Food Functioning, Alternative energy through cold fusion, and Nanofoods and allied sectors of the human domain. For his global recognitions in these fields, he has been seminally elected by numerous prestigious academies of the world, including:

- Elected fellow of the American Institute of Medicine and Biological Engineering.
- Elected fellow of the American Association for the Advancement of Science.
- Elected fellow of the National Academy of Inventors; and
- Elected fellow of the Academy of Science, St Louis—one of the oldest scientific academies of the world.

In 2024, the United States Department of State Bureau of Educational and Cultural Affairs (ECA) and World Learning selected Dr. Katti as a Fulbright Global Specialist in Chemistry Education, related to his inventions and monumental contributions in Nanobiomaterials and Green Nanotechnology, and his discovery of a new medical modality referred to as Nano-Ayurvedic Medicine. National Academy of Inventors—the largest Inventors Academy of the World has recently produced a documentary on Dr. Katti’s inventions which are used for combating COVID and related deadly infections: <https://www.youtube.com/watch?v=-OVI33BFMtk&t=13s> For his ground breaking discoveries in medicine, Dr. Katti has been awarded several international awards, recognitions and citations, which include: 2020: **United Nations/IAEA recognized Dr. Katti as the Global Expert in ‘Green Nanotechnology’ and in ‘Nano-Radiopharmaceuticals’**; 2018 Professor of the European Union in Green Nanotechnology; 2017 Distinguished Alumni Award from the University of Missouri for his life time achievements; Winner of the 2016 'Person of the Year in Science' award. Dr. Katti was selected for this coveted award for his pioneering research in Green Nanotechnology with applications to Nanomedicine and elected to the fellowship of the National Academy of Inventors (NAI in 2015), recognizing the discovery of ‘**Katti Peptides**’—a group of peptides used in biomedical sciences and nanomedicine product development. **Dr. Katti represented the United States of America at the United Nations IAEA (2015-2022)**—a program on Nano Radiopharmaceuticals—with 22 member Nations' research and development program at the International Atomic Energy Agency (IAEA) in Vienna, Austria. In recognition of his groundbreaking discoveries of radioactive gold nanoparticles in cancer therapy with implications in theranostics and a plethora

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For the latest news releases about Dr. Katti: <https://medicine.missouri.edu/news/dr-kattesh-katti-completes-grant-south-africa-fulbright-specialist>.

Dr. Katti’s live Interview on Green Nanotechnology: [Nano Technology Interview UJ FM.mp3](#)

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