

The KONA Award 2024

The KONA Award has been presented to the researchers who have greatly contributed to research and development as well as education in the field of Powder and Particle Science and Technology since 1990. It was originally given by the Hosokawa Micron Corporation, but now it is presented annually to researchers from all over the world by the Hosokawa Powder Technology Foundation.

The KONA Award 2024 has been presented to Dr. Anthony J. Hickey in recognition of his pioneering contributions to the science and technology of inhaled drug delivery, his leadership in pharmaceutical innovation, and his enduring commitment to advancing therapies for global health needs.

Dr. Hickey is Distinguished RTI Fellow Emeritus at the Research Triangle Institute, Professor Emeritus in Pharmacoengineering and Molecular Pharmaceutics and formerly Director of the UNC Catalyst for Rare Diseases at the Eshelman School of Pharmacy, University of North Carolina at Chapel Hill. He received his Ph.D. and D.Sc. in pharmaceutical sciences from Aston University, Birmingham, UK, and is a Fellow of the American Association for the Advancement of Science (AAAS), the American Association of Pharmaceutical Scientists (AAPS), the Royal Society of Biology (RSB), the Royal Society of Medicine (RSM) and the National Academy of Inventors (NAI).

Widely recognized as a world authority in pulmonary drug and vaccine delivery, Dr. Hickey has led multidisciplinary research on lung disease, inhaled therapies for tuberculosis, and treatments for rare and neglected conditions. His body of work includes more than 220 scientific articles, 15 books, and 44 book chapters, leaving a lasting impact on academia, industry, and regulatory science.

His influence extends beyond the laboratory to commercialization and entrepreneurship. He founded three start-ups, including Cirrus Pharmaceuticals and Oriel Therapeutics, which created over 100 jobs and developed new therapies for asthma, cystic fibrosis, and pulmonary infections. His 57 patents—licensed to seven companies—have shaped marketed treatments in respiratory medicine. At times, he has also placed research tools directly into the public domain to accelerate progress for the wider scientific community. Among his many achievements, Dr. Hickey was among the first to demonstrate the promise of aerosolized therapies for tuberculosis, including inhaled capreomycin, which advanced through human trials with NIH support. While the commercial market for inhaled medicines expanded, he consistently advocated applying these technologies to underserved populations. His role in helping found Medicine in Need reflects this commitment.

Dr. Hickey has also played a leading role in pharmaceutical policy and regulatory science. For more than two decades, he has served on expert committees of the United States Pharmacopeia, including as Chair of the Aerosols Expert Committee, where his work on methods and monographs underpins standards cited by the U.S. Food and Drug Administration. He is also contributing to efforts within the Product Quality Research Institute to establish an inhaled biopharmaceutical classification system, modeled on the oral biopharmaceutics framework, with the potential to accelerate development and broaden access worldwide.

As an educator and mentor, Dr. Hickey has guided more than 50 graduate students and post-doctoral fellows who now hold leadership positions across academia, industry, and government. His teaching has been recognized with awards such as Outstanding Teacher of the Year at the University of Illinois at Chicago. He has received numerous international honors, including the Thomas T. Mercer Joint Prize for Excellence in Inhaled Medicines and Pharmaceutical Aerosols (2017), the Ralph Shangraw Memorial Award (2018), and the Margaret Elliott Knox Award for Excellence from RTI International (2019). The KONA Award adds to this distinguished record, underscoring his role as an architect of modern inhaled drug delivery and as a scientific leader dedicated to public health.

Dr. Hickey's career reflects a rare balance of scientific creativity, entrepreneurial vision, regulatory leadership, and humanitarian commitment. His contributions have helped redefine how medicines are delivered to the lungs, improved treatment for millions of patients, and inspired a generation of scientists. The KONA Award honors not only his past achievements but also his continuing influence on the future of pharmaceutical sciences.



At the KONA Award presentation ceremony: President Hosokawa (Left) and 2024 KONA Awardee Prof. Emeritus Anthony J. Hickey (University of North Carolina at Chapel Hill, USA).