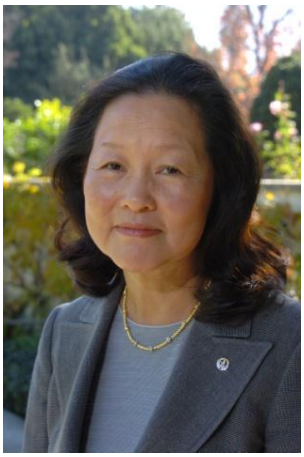

Distinguished Lifetime Achievement Award

Dr. Alice S. Huang, Ph.D.

Senior Faculty Associate in Biology
California Institute of Technology

Citation of Accomplishment:

For original discoveries in virology; prominent leadership in medicine, science & technology policy, education and professional societies, the advocacy for women and minorities in science and the practice of science diplomacy as a force in international collaboration and for excellence in the practice of science.

Dr. Huang was one of the pioneering researchers in animal virology in the 1960's. She introduced Vesicular Stomatitis Virus (VSV) as an experimental system and was the first to separate from the standard virus a class of defective interfering (DI) particles. She demonstrated the ability of DI particles to inhibit viral spread, suggesting novel approaches to the prevention of viral transmission and virulence. She carried out many of the initial investigations of viral replication and macromolecular synthesis. Her work on the virion-associated RNA-dependent RNA polymerase with Baltimore led to the discovery of other virion-associated polymerases such as the reverse transcriptase. Her studies on pseudotypes, especially between RNA and DNA viruses, demonstrated the spread of viruses to new host cells; as well it provided important tools for genetic engineering.

As an administrator, Dr. Huang was instrumental in providing the vision and obtaining the support for beginning what is now known as "silicon alley" around the NYU neighborhood. She had national responsibility as the elected President of both the American Society of Microbiology and the American Association for the Advancement of Science, two of the largest scientific societies in the world. She also dedicated 18 years to shepherding the nascent Institute of Molecular Cell Biology, together with Brenner and Tan, into a successful center of research in what is now known as the Biopolis in Singapore. She continues to consult with research institutions and governments, sharing her expertise and practicing science diplomacy.

Throughout her career she has advocated for women in science. She encourages thoughtful approaches to reforms in teaching to attract students with diverse backgrounds and interests to become interested and committed to careers in science. She is a prominent model for later generations