Dr. Charles Wu
Master Pharmacology/Pharmacognosy Reviewer
The Botanical Review Team Lead the Office of Pharmaceutical Quality (OPQ) of the Center for Drug Evaluation and Research (CDER)
The United States Food and Drug Administration
USA

Dr. Charles Wu is a Master Pharmacology/Pharmacognosy Reviewer, and the Botanical Review Team Lead in the Office of Pharmaceutical Quality (OPQ) of the Center for Drug Evaluation and Research (CDER), the United States Food and Drug Administration (FDA). Dr. Wu trained in Clinical Medicine including Traditional Chinese Medicine (TCM) and earned his Ph.D. from the Medical Center, University of Amsterdam, the Netherlands. Dr. Wu began his career at FDA in 2001 as a product reviewer in the Center for Biologics, Evaluation and Research (CBER) and then as a senior Pharmacology/Toxicology reviewer in CDER. In 2013 Dr. Wu joined the Botanical Review Team (BRT) and have been promoted to the BRT lead since 2017. He also served as the FDA's Focal Information Contact (FIC) to the WHO-IRCH (International Regulatory Corporation for Herbal Medicine) since 2019 and becomes the Steering Group (SG) Member and Vice-Chair (2021-2023), as well as serving as an Expert for Regional Consultation of Traditional Medicine to COVID-19 Response in the African Region. During his tenure at FDA, Dr. Wu has gained extensive regulatory experience and scientific knowledge as a result of work with a variety of therapeutic products, including chemical, biological and botanical drugs and he has published over 30 peer-reviewed journal articles including SCIENCE and other scientific book chapters.

Traditional herbal medicines (THM) have been used for thousand years for a variety of medical conditions including viral infectious diseases. A national survey showed that about one in five American uses them. THMs have been studied for many medical problems, including cancer, stroke, heart disease, mental disorders, and respiratory diseases (such as bronchitis and the common cold), and numerous drugs derived from botanical/herbals are eventually developed and used widely, such as Paclitaxel, Epidiolex and Crofelemer. During the COVID-19 pandemic, many studies conducted with botanicals/herbals are of inadequate quality due to the emergency, and therefore no firm conclusions can be made about their effectiveness. In addition, interactions between various ingredients and complex interactive biological systems as well as mechanism of action remain largely unknow, which remains a great challenge in the development of botanical drug for the COVID-19 treatment or for the Emergency Use Authorization.