

Dr. Guoshun Wang

Professor of Microbiology and Immunology, Genetics and Medicine

Education

Nanjing Agricultural University, Nanjing, China	D.V.M.	1985	Veterinary Medicine
Peking University, Beijing, China	Ph.D.	1992	Mol. & Cell Biology
University of Iowa, Iowa, USA	Postdoctoral	1997	Molecular Medicine



Dr. Guoshun Wang is a professor in the departments of microbiology, immunology and parasitology, medicine, and genetics.

Dr. Wang oversees several research projects, including cystic fibrosis (CF) pathogenesis and gene and stem cell therapy, chloride anion and phagocytic innate immunity, and alcohol-directed anti-inflammation and immunosuppression.

For more than two decades, Dr. Wang's lab research has been focused on cystic fibrosis, one of the most fatal genetic diseases in the Caucasian population. His lab was the first to discover that mutations in cystic fibrosis transmembrane conductance regulator (CFTR) can lead to failure against infections. Over 90% of CF patients die of uncontrollable bacterial infections of the lungs. The Wang lab has provided the first evidence that the CFTR impairs the production of hypochlorous acid (HOCl) for effective bacterial killing. Currently, the lab is further characterizing the importance of this defect in CF lung pathogenesis and is also pursuing molecular therapies to correct the defect.

Alcohol has long been recognized to have anti-inflammatory and immunosuppressive effects. However, the molecular mechanisms underlying this phenomenon are not well defined. Previous research from Dr. Wang's lab has shown that ethanol upregulates Glucocorticoid-induced Leucine Zipper, a steroid-responsive gene, thus modulating cell cytokine expression and secretion. Dr. Wang's lab is now characterizing how alcohol utilizes the glucocorticoid signaling pathway to modulate immune cell status.

Dr. Wang earned his Doctor of Veterinary Medicine from the College of Veterinary Medicine at Nanjing Agricultural University in China. From Peking University, he earned both an MS in Preventive Veterinary Medicine, as well as a PhD in Cellular and Molecular Biology from the College of Life Sciences.