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## **Ligandomics: A Revolutionary Approach for Drug Discovery**

### **Abstract:**

Ligandomics is the study of biological molecules (ligands) that interact with binding sites on the cell, how they interact, what are their functions, and how they differ between normal and diseased cells. In contrast to conventional approaches of discovering one ligand at a time, ligandomics can systematically map disease-selective cellular ligands in the absence of molecular probes. Biologics targeting these ligands with disease selectivity have the advantages of high efficacy, minimal adverse effects, wide therapeutic indices, and low safety-related attrition rates. Therefore, ligandomics represents a paradigm shift to address the bottleneck of target discovery for drug development.

### **Biography:**

Dr. Iok-Hou Pang has been involved in ocular drug discovery at Alcon Laboratories (a Novartis Company), Fort Worth, Texas, for more than 20 years, and became the Head of Glaucoma Research since 2008. In 2012, he joined the University of North Texas Health Science Center as professor and Founding Chair of Pharmaceutical Sciences in the newly established College of Pharmacy, and is a member of the North Texas Eye Research Institute. Dr. Pang is also an adjunct faculty member of the Biomedical Engineering graduate program at the University of Texas at Arlington, a Visiting Professor of Fudan University and Jiaotong University in Shanghai, Jinan University in Shenzhen, National Defense Medical Center in Taipei, and Sichuan University in Chengdu, China. He serves on the Advisory Board of Association of Ocular Pharmacology and Therapeutics. He is a consultant of several pharmaceutical companies on drug discovery and development. Dr. Pang has edited one book, published more than 100 peer-reviewed manuscripts and book chapters, and has been issued numerous U.S. and international patents. He is an academic editor of "Medicine" and reviewers of many ophthalmology and pharmacology journals.