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Molecular Microbial Pathogenesis of *Vibrio vulnificus*: The Fundamental Route towards Definitive Solutions

<Biography>

Dr. Joon Haeng Rhee is a graduate of Chonnam National University Medical School in 1984 and received PhD from the same university in 1992. He has been working on molecular microbial pathogenesis and vaccine biology for more than 30 years. His team was the first reporter of the whole genome sequence of *V. vulnificus*, which became one of the most widely used standard strains in the *Vibrio* research field. His team also discovered the most crucial virulence factor, RtxA1 toxin, which spurred molecular level studies of *V. vulnificus* pathogenesis in the community. Vaccine study was first started aiming the high mortality *V. vulnificus* infections. During the vaccine research, his team came across the finding that a flagellin protein of *V. vulnificus* has an excellent mucosal adjuvant activity in late 1990s. Now flagellin is applied to the development of effective vaccines and immunotherapeutics against diverse diseases such as cancers, allergies, and Alzheimer's disease. He served the president of Korean Vaccine Society (KVS) from 2013 to 2015. He was also elected as the president of Korean Microbiology Society in 2022. He was elected as an ISV Fellow in 2017. He served the director of Clinical Vaccine R&D Center and Combinatorial Tumor Immunotherapy Research Center of Chonnam National University from 2018 until 2025. He became a member of National Academy of Medicine of Korea. As of September 2024, he has more than 180 papers published in peer-reviewed journals and named as an inventor on more than 50 patents. He is officially retired from the professorship as of September of 2025 and appointed as a Distinguished Professor, which made him to maintain his current laboratory for a while.