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Photodynamically inactivated *Leishmania* for safe and effective delivery of vaccines for immunotherapy of infectious and malignant diseases

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A universal platform is under development to deliver multi-valent vaccines by using *Leishmania*. These are trypanosomatid protozoa, which naturally infect dendritic cells and parasitize macrophages exclusively as their host cells. The molecular attributes of these parasites are exploitable for homing natural and transgenically introduced vaccines to these antigen-presenting cells (APC). The efficacy of vaccine delivery by this APC-homing platform can be substantially preserved by using oxidatively photo-inactivated *Leishmania* to ascertain their safety. This is referred to as photodynamic vaccination, which has been shown to safely and effectively deliver naturally occurring vaccines of *Leishmania* against experimental visceral leishmaniasis. High capacity of *Leishmania* of transcription/translation activities makes this platform particularly attractive for expressing multiple transgenes as vaccines for immunotherapy against heterogeneous viral infections and tumors.

Biography

Kwang Poo Chang has completed his PhD from University of Guelph, Ontario, Canada and Postdoctoral studies from Rockefeller University. He has worked as an Assistant and Associate Professor at the Rockefeller University for ~10 years. Thereafter, he became a tenured Professor at Rosalind Franklin University of Medicine and Science, USA. He has published more than 120 papers in reputed journals and has been serving as an Editorial Board Member of repute. He is the Organizer of many national and international scientific activities and research collaborations.

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