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SERIES 81

Dr. ChaeOk YUN

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Series – 81

Date and Time – October 27 (3:00 PM JST)

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Speaker – Dr. ChaeOK YUN

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Title - Nanomaterial-based delivery systems to overcome the limitations of oncolytic adenovirus

Abstract- Despite exponential growth in clinical development of oncolytic virus (OV) in recent times, there are several limitations that must be overcome to maximize their therapeutic potential in the clinical environment. Both local and systemic delivery efficiency of OVs can be greatly augmented by utilizing nanomaterial-based carrier systems. Nanomaterials can be strategically engineered to facilitate novel or enhanced functional properties to OVs that are not easily achievable via genetic engineering of the viral genome; for example, ability to evade of host immune surveillance system, prolong blood circulation time upon intravenous administration, perpetuate biological activity of the virus in tumor tissues, or attenuate nonspecific shedding and off-target accumulation in normal tissues. Although there is no one-size-fits-all carrier system that addresses numerous and diverse obstacles to maximize the delivery efficiency of OVs, many innovative nanomaterial-based carrier systems have been developed to enhance the therapeutic potential and safety profile of locally or systemically delivery of OVs to date.