Targeting the Next Virus to Emerge

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Abstract

How can we prepare toward the unknown virus that would start the next big outbreak? In my talk I will focus on particular viruses that cause viral hemorrhagic fevers. These viral fevers are devastating human diseases that pose a significant risk to millions of people worldwide. Many of the viruses that cause hemorrhagic fevers are contagious and have the capacity to cause outbreaks. The recent Ebola crises exemplified how critical it is to have effective countermeasures that are tested, validated and manufactured ahead of time. To have a chance to be effective against new emerging viruses, anti-viral therapies need to target basic and essential components of the viral machineries that will be relevant for the emerging viruses as well. Our approach for targeting the Arenaviridae family of viruses resulted with a pan-reactive immunotherapeutic reagent that has the potential to be effective against additional pathogenic members of this family that might emerge in the future. We propose that this approach could be generalized in order to target other viral families as well.