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Retroviral Capsid: Assembly, Maturation and Interaction with Host and Antiviral Factors

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Message from the Guest Editors

Dear Colleagues,

The retroviral capsid (CA) protein is involved in multiple steps in the virus life cycle. In virus particle assembly, the CA protein is the key driver in forming the hexameric lattice found in immature particles, and following virus maturation forms a CA core in mature virus particles. Following infection, the CA protein is involved in core trafficking, uncoating, reverse transcription, and nuclear entry. CA is recognized by numerous cellular proteins, including those that can either facilitate or restrict CA core stability, trafficking, and/or nuclear entry. Mutation of CA and targeting by novel antiretroviral compounds can perturb core stability and particle infectivity. Structure-function analysis of CA variants and CA bound to small molecules have provided further insights into CA function and the mechanism of small molecule antiviral action.

This special issue aims to highlight the cutting-edge advancements in methods and research on the retroviral CA protein, spanning topics such as CA trafficking and nuclear import, core stability, reverse transcription, virion assembly, maturation, and interactions with the host proteins and antiviral molecules.



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Message from the Editor-in-Chief

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Electronic files or software regarding the full details of the calculation and experimental procedure, if unable to be published in a normal way, can be deposited as supplementary material.

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