Special Issue for CURRENT HIV RESEARCH (CHIVR)

“The HIV/SIV Envelope Protein: From Structure To Function To Host Evasion”

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Aims: The focus of this special issue is to provide a current view of the primate lentivirus surface/Env protein from structural and biological perspectives.

Abstract: The HIV/SIV Envelope Protein (Env) is the only viral protein on the surface of the cell. Thus it defines the target cell for binding and entry, it is the sole target of neutralizing antibodies while also being a target for CTL, and it is the focus of work on developing a vaccine that could induce a useful neutralizing antibody response. Recent advances in understanding the structure and dynamics of the Env protein will continue to enhance our understanding of function in entry and in evasion of the host humoral response. These reviews will give an update on our understanding of Env protein structure and function, and its role as a target for neutralizing antibodies from the host.

Keywords: HIV, AIDS, SIV, Env protein, gp120, entry, structure, antibodies, CD4, coreceptor, evolution

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(Tentative Outline)

Our Issue
Article 1. New Views of the Structure of the HIV-1 Env Protein
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Article 2: **Structural Dynamics of HIV Env: Linking Structural, Functional, and Phenotypic Variation Among Isolates**
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Article 3: **The Host Humoral Response To the HIV-1 Env Protein**
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Article 4: **Evolution of Host Target Cell Specificity During HIV-1 Infection**
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Article 5: **Alterations of Env to Retarget Infection in vivo**
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Article 6: **SIV Coreceptor Specificity In Natural and Nonnatural Host Infection**
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