

Special Issue

Unraveling the Host–Virus Interplay in Viral Infection: Molecular Mechanisms and Therapeutic Horizons

Message from the Guest Editor

Viruses present formidable challenges to global health, including rapid mutation rates, zoonotic spillovers, and the potential for pandemics that overwhelm healthcare systems, as seen with recent emerging virus outbreaks like COVID-19 and Mpox. These threats underscore the urgent needs for scientific advancements in understanding host–virus interplay at molecular levels, developing robust antiviral defenses, and translating clinical insights into innovative therapies. By fostering interdisciplinary research in virology and medicine, we can enhance preparedness, improve diagnostics, and create effective vaccines to mitigate future risks. This issue delves into the dynamic host–virus interplay in viral infection across molecular aspects, examining cellular interactions, antiviral defenses, pathogenic processes, and their implications for disease management. We welcome original research, reviews, and perspectives that bridge fundamental molecular biology with clinical outcomes, including novel therapeutic and molecular virus surveillance strategies to address viral challenges.

Guest Editor

Dr. Agustín Valenzuela-Fernández

Laboratorio de Inmunología Celular y Viral, Unidad de Farmacología, Sección de Medicina, Facultad de Ciencias de la Salud, Universidad de La Laguna (ULL), 38320 La Laguna, Spain

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4052 Basel, Switzerland
Tel: +41 61 683 77 34
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