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LASSA FEVER ANTIVIRAL DEVELOPMENT

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Abstract:

The Lassa virus causes Lassa fever, a severe viral hemorrhagic sickness that is mainly spread to humans via contact with infected Mastomys rat fluids. It is endemic in a number of West African nations and contributes significantly to annual morbidity and mortality. There are now few therapeutic options available, and the most widely used therapy is the antiviral medication ribavirin, albeit its efficacy depends on early delivery and it may have side effects.

Finding new substances that prevent viral entrance, replication, or protein synthesis is the main goal of current antiviral development initiatives. RNA polymerase inhibitors, monoclonal antibodies, and small-molecule antivirals that target viral glycoproteins are promising approaches. Potential treatment candidates have been found more quickly thanks to developments in molecular virology and drug discovery tools. To enhance treatment results, combined antiviral treatments and vaccination studies are also being investigated. Despite these developments, problems with virus mutation, clinical trial implementation, and therapeutic accessibility still exist. To lower mortality and manage Lassa fever outbreaks in endemic areas, more research into antiviral drugs and better treatment approaches is crucial.

Keywords: Ribavirin, Antiviral drug development, RNA polymerase inhibitors, Monoclonal antibodies, Viral glycoprotein inhibitors, Viral replication inhibition