Treatment Options in COVID-19: The Role of Bioavailable Antiviral Ribonucleoside Analogon NHC in vitro

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Keywords

Pneumonia; China; WHO; COVID-19; Coronavirus Disease; Infection; SARS-CoV-2.

Letter to the Editor

On December 31, 2019, WHO was informed of cases of pneumonia of unknown cause in Wuhan City, China. A novel coronavirus was identified as the cause by Chinese authorities on January 7, 2020 and was provisionally named "2019-nCoV". This new Coronavirus causes a clinical picture which has received now the name COVID-19. The virus has spread subsequently worldwide and was explained on the 11th of March, 2020 by the World Health Organization to the pandemic. There is no admitted therapy for COVID-19, and the present standard of treatment is the supporting treatment. SARS CoV 2 uses the cell entry receptor protein to Angiotensin Converting enzyme II (ACE-2) to reach human cells and to infect [2]. What we know is that SARS-CoV-2 needs for entry in the cell (Pneumocytes II) the help of a serine protease TMPRSS2 and cathepsin L [2-4]. Since the outbreak in China in December 2019 researchers searching for adequate therapy to control viral spreading and to inhibit COVID-19 effectively. To date, no effective drug to treat this severe viral infection was found. Publications about angiotensin II receptor blocker reveal a new effective method to think about in treating COVID-19 [6-10]. Moreover, different therapy options were started to stop the devastating potential of COVID-19 worldwide. Antibody-rich donated plasma from survivors, different inhibitors are part of analysis to stop the entry of the virus into the cell and disturb the connection between SARS-CoV-2 and angiotensin-2 receptor binding. A new orally bioavailable broad-spectrum antiviral inhibits was found in SARS CoV-2 in human airway epithelial cell structures and in different coronaviruses in mice and published in
In this publication the ribonucleoside analog beta-D-N4-hydroxyctydine (NHC, EIDD 1931) had great potential and antiviral potency against SARS-CoV-2. The results of Timothy Sheahan’s work and his colleagues highlight the potential utility as an effective antiviral drug against COVID-19 coronavirus in vitro [5]. As a consequence, further off-label trials in severe COVID-19 patients must follow.

References