

# CHEMICAL ENGINEERING AND COVID19

Subjects: Chemical Engineering | Biomedical & Chemical Engineering

Submitted by:  JAYDIP DATTA

## Definition

The mankind of 2020 century are facing a tremendous challenge against Covid19 / SARS-COV-2 infection . Widespread viral stunt of spreading followed by death are encasulating the whole world including China , U.S , Brazil , Africa , U.K , USSR , Middle East and finally India . On the pandemic face of Corona Virus Chemical Engineers are having many scopes to serve the following areas of specialisations . 1. SAFETY , HEALTH , ENVIRONMENT ( SHE & Public Health ) 2. Molecuar Simulation of newer antivirals with the help of Engineering Mathematons as well as Computation . 3. Emergency Planning including Personnel Protective Equipments ( PPE ) , Health Statistics Record . 4. Scope to scale-up the vaccine production 5. Global economic crunch associated with Crude oil crisis during this pandemic .



REF : college4u.com -news18.com - thechemicalengineering.com

The image describes an intermixing concept of collaborating the process engineering - covid model with an attempt of newer antiviral drugs .

SHE policy : This is the guidelines to prevent Covid infection regarding Do and Don't like use of PPE & sanitisation procedure regarding WHO as well as EPA ( Environment Protection Agency ) guidelines [ 1 ]. This plays a safe impact to prevent quick spreading of corona-virus . Medical instrumentation like ventilator , oxy-pulse meter , Thermal Scanner can be included in bio-medical maintaince. This types of ICU instruments are very important during severe accute respiratory syndrome ( SARS-COV- 2 ) [ 2 ] . Record of covid affected pateints including symptomatic , assymptomatic and death case record to be maintained with data base management system . Statistical help may be needed [ 3 ] . Mathematical with -molecular bonding approach are essential to explain the spreading kinetics of virus as well as the design of antiviral drug-antigen stability ( Lopinavir - Ritonavir / Remdesivir / Flavipiravir ) [ 4 ] . The concept of bio-technology is essential to use sera like interferon 1-b treatment combined with anti-viral management [5] . The main challenge for a bio-chremoical engineer is to development of pilot plant scale up technique of under pipeline vaccine [ 5 ] . The economic sustainability due to crude oil crisis is another a big challenge of a chemical engineer during this pandemic phase [ 6 ] . The concepts of [1] to [ 6 ] are ine scope of a chemical engineer over an integrated developed environment .

REF : [1] *Datta J , Covid19 - An Environmental Pandemic ! ,osf.io , 2020 .*

[ 2 ] *Datta J , What is Industrial Engineering - Is it a new branch of engineering ? , RG , 2019 .*

[ 3 ] *Datta J , Whether Statistics Teaching Should be Necessary in Academics / Research / Industry / Real life Experiace ? , RG , 2020 .*

[ 4 ]Datta J , Covid19 - A COMPREHENSIVE MATHEMATICAL APPROACH , [osf.io](https://osf.io) , 2020 .

[ 5 ]Datta J ,Whether Bio-Technological Research is essential to develop our nation/ including the threats of Corona Virus - How ? , RG , 2020 .

[ 6 ]Datta J , Whether an ENGINEER to be also considered as a resource person during this Covid19 like Epidemiological Emergency Planning ? , 2019 . ( REVISED ON : 14.08.2020 - Chemical Engineering Safety , Onsite Emergency Planning , Drug safety trial ) .

[ 7 ] <https://osf.io/74cfp/>

## Keywords

---

Covid19;Chemical Engineering;Biotechnology;Molecular Modelling;Onsite Emergency Planning;Safety - Health - Environment ( SHE );Lab-Scale Up of Vaccine development

---

Retrieved from <https://encyclopedia.pub/2409>