**Drug/inhibitor resources for Designing Drugs for Coronavirus**

The recently emerged 2019 Novel Coronavirus (SARS-CoV-2) and associated COVID-19 disease have caused serious or even fatal infection and yet no approved therapeutics or effective treatment is currently available to effectively combat the outbreak. The global pandemic caused by novel coronavirus warrants an urgent situation for researchers to find therapeutic agents that are less toxic and readily available

**Potential drug repurposing strategies**

Developing and releasing a new drug would cost around $1 billion, and accomplishing it will take about 12 years. Because of high cost, long-term, and high-risk commitment, many pharmaceutical companies integrated CADD into their method of drug development. This revolutionized the field of drug research, and it greatly lowered the expense of discovering new compounds. The model-based methods and software-based research development became an important component in the process of drug discovery when discovering new bioactive drugs.

By predicting the drug-derived therapeutic activity and inactivity, the CADD has significantly reduced costs and enhanced the drug development process by narrowing down potential medicinal compounds. This will minimize the number of animals needed in drug development testing and preclinical processes, help maintain problem-free good numbers, and increase the quality of the findings

 Small molecule ligands and drug libraries also play significant roles in repurposing drugs and in discovering new medicines.

1. FAD drugs

Food and Drug Administration (FDA), a federal agency of United States Department of Health and Human Services was formed in June 1906.

FDA is responsible for protecting and promoting public health through the regulation and supervision of Food safety, Dietary Supplements, Prescription and OTC pharmaceutical drugs, Biopharmaceuticals & Medical Devices.

2. Pubchem

PubChem ([http://pubchem.ncbi.nlm.nih.gov](http://pubchem.ncbi.nlm.nih.gov/)), managed by the National Centre for Biotechnology Institute (NCBI) and the National Institute of Health, is a global archive for chemical compounds and their bioactivity. PubChem is growing increasingly with periodic updates of chemical structure, bioactivity, and target molecular data. PubChem is also closely related to other literature and biomedicine sources, such as PubMed, Protein, RNA, Structure, and Taxonomy. Pubchem contains a compiled list of data from PubChem related to COVID-19 and SARS-CoV-2. It contains 343 compounds in clinical trials for COVID-19 and 397 compounds collected from the protein data bank for COVID-19.

3. **Zinc Database**

The Zinc database is a publicly accessible collection of purchasable molecules, many of which are “drug-like” or “lead-like” compounds. Several popular docking programs can be used instantly as they are accessible in 3D formats. Docking hypothesis compounds can also be purchased for fast testing.

**4. DrugBank**

DrugBank has been developed to provide a comprehensive, completely searchable in silico drug database that provides sequence, structure, and pathway data on drug molecules and drug target. DrugBank contains a compiled list of 42 entries of unapproved experimental treatments, 74 entries of potential drug targets, 2696 entries of external clinical trials for COVID-19, and related conditions.

**5. ChEMBL**

Chembl is a manual compilation of drug-like bioactive molecules containing chemical, bioactive, and genomic data to help turn genomic information into effective new drugs. It consists of a compiled list of 6.9k compounds, 9.8k activities, and 48 assays related to SARS-CoV-2.