

- **Countering concerns related to reverse engineering:** The idea that manufacturers will steal vaccine technology is also devoid of any sound reasoning. Original genomic sequence openly shared by China, which gave firms a head start in developing vaccines. Also, most of the foundational science and ideas with respect to vaccine has anyway come from public-funded universities and research institutes.
- **Innovation is still rewarding:** This is due to the fact that even if compulsory licenses are issued by over-ruling patent restrictions, royalties are still paid to the patent holders. Consider for example Pfizer's vaccine generated \$3.5 billion in revenue in the first quarter of 2021 itself.

CASE STUDY -- AIDS fight in African Continent.

There are recognised ways to overcome the patents hurdle, ensuring social justice and boosting the COVID19 battle. A useful reminder from two decades back helps put the issue in perspective. While provisions of TRIPS concerned public health officials all over the world due to its potential to raise the cost of essential medicines, voluntary licensing agreements between pharma producers were able to bring down the cost of medications. In the backdrop of anti-TRIPS activism by low- and middle-income countries (12 million HIV patients had lost lives in Africa), the pharma giants soon realized that they won't be able to profit off of these countries anyways owing to low per capita income among other things. These giants then placed their licensing agreement in the UN affiliated Medicines Patent Pool (they still owned the patent rights). In return they asked for a 'Royalty' payment and conditions such as limiting sales to only low-income countries. Several India based companies used these Voluntary licences to manufacture these drugs on a large scale and sold them at cheaper prices.

A brilliant documentary, Fire in the Blood, captures the utter destruction of disease and the heroic efforts of Yusuf Hamied, chairman of Cipla, to make generic antiretroviral (ARV) drugs available and accessible to dying millions of Africa. As a result, for example, 'Tenofovir' a first line treatment for HIV/AIDS, has come down from 200-500\$ per person per year to almost 39\$ per person per year in low-income countries.

From then on, India has lived up to its reputation of being the "pharmacy of the world", supplying affordable and generic drugs to poor nations. Nearly 70 per cent of medicines produced in India are exported to developing countries; 75-80 per cent of all medicines distributed by the International Dispensary Association (IDA) to developing countries are manufactured here. India ranks second on the list of countries from which UNICEF purchases medical supplies. Eighty per cent of ARVs used by Médecins Sans Frontières (MSF) are purchased in India and are distributed in treatment projects in over 30 countries. Globally, 70 per cent of the treatment for patients in more than 80 developing countries has come from Indian suppliers. The US President's Emergency Plan for AIDS (PEPFAR), also purchases ARVs from India for distribution in developing countries, resulting in cost-savings of up to 90 per cent.