

Open Source Covid Movement: Non-Capitalist Alternative to Control Pandemic

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B Ekbal

AT a recent press conference, Kerala Chief Minister Pinarayi Vijayan made an important announcement with global political dimensions. He said that the monopoly drug manufacturers are engaged in developing vaccines, medicines and other products related to the treatment of Covid-19. These would be patented and sold in the market for prices unaffordable to ordinary people. As an alternative, an Open Source Covid Movement based on the principles of cooperation and sharing is also coming up. The chief minister announced the state's solidarity with this movement. Kerala has already drawn the attention of the global community for its unparalleled success in resisting Covid-19. The chief minister's declaration of solidarity with anti-capitalist and anti-imperialist forces that collaborate to develop a people's model to fight the novel coronavirus has also been noted at the global level.

PATENTING SYSTEM

Multinational drug manufacturers dominate the research and development of medicines. Medicines and vaccines they develop will be subjected to patent rules. During the patent period of 20 years they will have monopoly in marketing their drugs. The companies will have the rights to fix the price and choose their markets. Earlier in India as per the patent rules it was legal to produce generic variants of patented medicines using other manufacturing processes. But the situation has changed since 2005 with the introduction of product patent as per TRIPS agreement. It is not possible now to produce cheap generic alternatives to patented drugs. In this scenario price of medicines is soaring up globally.

Not only medicines but medical instruments and bio-technological research products are also patented. This makes them unaffordable to the common people. The PCR technology now being used for Covid-19 detection was developed by Nobel Prize winning scientist Kary Mullis and his colleagues. But its patent rights were appropriated by the Cetus Corporation which financed the research. Now other companies can manufacture PCR instrument and market it at competitive rates only because the mandated patent period expires. Many companies are patenting the genetic structure of disease-causing organisms. Information regarding genetic structure is vital to the development of anti-virals and antibiotics against the organisms. Companies extract exorbitant royalty for information patented by them from those who want to use this information to manufacture drugs. This leads to steep rise in the price of antibiotics and anti-virals.

The rise in the price of health products is not the only problem caused by the patenting system. The multinational companies are unwilling to finance research on diseases that affect the people in developing countries and the poor in developed countries. Many diseases are thus neglected. The patenting system and the

consequent monopolisation of health care have created an enormous crisis in many countries.

PHILOSOPHY OF FREE SOFTWARE

In this context attempts are being made to replicate in the medical field the achievements in the field of free software. This has led to the initiation of many people-centred research projects in the medicine. It was Richard Mathew Stallman, the professor of Computer Science in Massachusetts Institute of Technology who conceived the concept of General Public Licensing as opposed to monopoly patenting.

The consumer has neither any right to share proprietary software with others, nor the right to modify the software since the source code is copyrighted by the company and hence their monopoly. The source code of software under general public licensing is publicly available. It can be freely copied and shared. The philosophy of free software is based on the principles of freedom, cooperation and sharing.

Based on the above principles, Lorence Lessing, the head of the department of law at Stanford University, has formulated copyright rules under the title "Creative Commons". The objective of the Creative Commons is to give the freedom to propagate scientific and cultural innovations without any profit motive, only recognizing the identity and role of the innovator. Attribution and Share Alike are the principles of Creative Commons copyright rules. The software which recognise the principles laid down in Creative Commons and General Public Licensing are also known as Open Source Software.

OPEN SOURCE DRUG DISCOVERY

Several initiatives have sprung up in manufacturing health products and medical research, drawing inspiration from the philosophy and praxis of Open Source Software. Open Source Drug Discovery (OSDD) is one of them which is being followed in many countries. It provides an open, collaborative platform for contributions from drug researchers all over the world to drug research. OSDD is presently engaged in developing potentially non-profitable medicines for diseases neglected by multinational companies. In India, CSIR had initiated research for the invention of medicine for tuberculosis in the OSDD model in collaboration with several institutes in India during the second UPA regime. A few university departments and education institutions in Kerala had collaborated with this project. But the NDA government has discontinued the financial assistance for this project.

TOWARDS A PEOPLE'S RESEARCH MODEL

New projects have come up in several countries on the model of OSDD. Collaborative Drug Discovery (CDD) operates from California for providing web-based information to non-profit medical research organisations. Cambia, an NGO in Australia, has initiated a project called Patent-less Initiative for Open Innovation (PIOI) for providing information to institutions and individuals interested in research on intellectual property rights. TDR Targets (TT) is a project jointly operated by WHO and UNICEF for gathering information on genetic structure necessary for the development of medicines for diseases common to tropical regions. As part of the project the genetic information relating to Chagas Disease commonly found in African countries have already been identified. The Structural Genomics Consortium jointly

operated by the Universities of Oxford (Britain), Toronto (Canada) and Karolinska (Switzerland) are engaged in identifying and analyzing the three-dimensional structure of protein molecules, useful for the development of organic medicines and making such information available for research on the public domain.

OPEN SOURCE COVID INITIATIVE

With the global spread of Covid-19, several initiatives for research to develop drugs and devices necessary for the management of Covid-19 have come up all over the world, drawing inspiration from open source philosophy. Open Pharma Foundation in which Indian scientists also work plays a leadership role. It points out that an effective check against Covid-19 cannot be developed without delay and duplication if research is being done on commercial lines. Open source systems work on the principles of transparency in scientific research based on collaborative research and cooperation rather than competition. Collaborative research is comparatively cheaper. It can prioritise neglected diseases. In place of commercial interests, open source systems are motivated by concern for the health of the people all over the world. The finances for their research endeavors are met from contributions made by the World Health Organisation and other international agencies, charitable foundations, and from crowd funding and undertaken with the support of universities.

The areas in which open source systems are concentrating in relation to Covid-19 containment are testing technologies, diagnostics and the development of anti-virals and vaccines. The health care clinical virology laboratory in Stanford University, US has already developed the probes and primers for PCR test in accordance with Open Source protocol. The existing scarcity in the kit for PCR test could be resolved once the Stanford kits become available for testing.

Open source research has also extended to observing people who have entered into close contact with Covid-19 patients, without intruding into their privacy. Open Source Pharma Foundation is collaborating with agencies like European Vaccine Initiative and Indian Institute of Technology, Delhi for the discovery of medicine for Covid-19. It is also engaged in testing different medicines used for viral diseases to determine how far they could be used for treatment of Covid-19. Using artificial intelligence, attempts are also being made to identify Ayurveda medicines useful for treating Covid-19. Open Source systems are also engaged in mass production of masks, Covid-related data analysis and health education.

OPEN SOURCE COALITION

The international coalition of open sources of legal and medical research in the field of Covid has made several contributions to Covid studies. The coalition has put forward the idea of Open Patent Pool. It makes detailed investigations into existing patents in health care and issues licence to those interested in producing them. The chief limitation is that the licensee will have to pay royalty to the company holding the patent. But the pool system helps to reduce the price of medicines to some extent as it breaks the monopoly in production. Open Covid Pledge is another initiative of the International Coalition. Companies like Microsoft, Facebook, Intel, Hewlett Packard, Amazon and Uber have pledged their patent rights for fighting Covid under this initiative.