Over a period 12 weeks (17 March – 9 June 2003), the number of infected Severe Acute Respiratory Syndrome (SARS) cases reported by the World Health Organization (WHO) has sharply jumped by more than 3700 percent (from 167 to 6280)! This wildfire-like spread of SARS has necessitated quick action to cull its dangers and researchers around the world are rushing to find a cure or some innovative answers to the problem.

Patent Mapping for SARS Researchers

by Tralvex Yeap

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Patents are an important source of published innovation that can be used to solve either known or novel problems. The World Intellectual Property Organization (WIPO) reports that 90 percent to 95 percent of all the world’s inventions are found in patented documents. In March 2003, tapping on the hidden value of intellectual property, patent technology specialists from Ella Cheong Miranda and Sprusons embarked on a humanitarian mission to conduct a computational patent mapping endeavour to unearth and analyze various valuable patent-related documents that will be valuable in assisting researchers in the race to find a diagnostic test kit and eventually a vaccine against SARS. Featured in this article are excerpts from the commercially available SARS Patent Analysis and Mapping Report.
Key Patent Players

The SARS patent mapping research covered more than 1300 viral related patents and revealed several key insights. One of the patent maps revealed over a hundred patent players (Fig. 1) that are into Polymerase Chain Reaction (PCR), including Roche Diagnostics and Artus GmbH who first made available their SARS test-kit on 10th and 15th April 2003 respectively. Interestingly, the largest group is that of unassigned inventions (111 patents) owned by individual inventors. This posed as an excellent opportunity to license relevant patents from the individuals at a good rate.

![Fig. 1. Key Patent Players.](image-url)
Another patent map (Fig. 2), a patent technology S-curve, exhibit exponential growth of SARS-Viral patent technology since the mid-90s. The dataset further revealed the average number of years for a SARS-Viral patent to achieve grant to be 3.08 years. A projection from the dataset is shown in Fig. 2.

Fig. 2. SARS-Viral Patent Technology S-Curve.
Additional insights available in the SARS Patent Analysis and Mapping Report include:

- Viral detection methods in the patent literature;
- Viral vaccination methods in the patent literature;
- Mapping of Players over time (since 1969);
- Mapping of Technology evolution/revolution (since 1969);
- Patent Portfolio analysis of selected diagnostics and potential therapeutics/vaccination players;
- Pneumonia Taxonomy covering Coronaviridea and Paramyxoviridea;
- Mapping of Patent Technology S-curve for Coronavirus related patents;
- Mapping of Top players for coronavirus related patents;
- Mapping of Key coronavirus Sub-technologies; and
- Opportunities for pre-emptive licensing of IP relating to diagnostics and therapeutics technologies.

Patents, Coronavirus, Animals and Humans

Since mid-May 2003, cats, pigs and snakes have been reported to be infected with the SARS virus. It was known from the SARS-Viral patent dataset that the coronaviruses are infectious to other animals such as dogs, goat, rabbit, chicken, cattle, house, rat, turkey, cow, monkeys and more, and further revealed that humans are also susceptible to the virus.
References


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Tralvex is a Senior Technology Intelligence Consultant and heads the Technology Intelligence Department in ECMS. He holds a MSc (Distinction) from the University of Leeds (UK) and has also been certified by the Institute of Patent Attorneys, Australia under the South East Asian Drafting course organized by FICPI. He has over 12 years of experience and deep knowledge in information and communications technology industry, as well as practical know-how in various facets of computing technology, as illustrated by his numerous software inventions in the public domain and three pending software patents such as “Advanced Patent Analysis and Mapping System” and “US Equities Best-of-Breed Analysis System”. Additionally, Tralvex is also a part-time university lecturer on computing subjects such as “Artificial Intelligence”, “E-Commerce”, “Human-Computer Interaction”, etc for both graduate and post-graduate program.

Readers of APBN who are interested to know more information on the report can visit ECMS’s SARS Extranet and request for a free guest login account to access further content.