Patenting activity related to COVID-19 vaccines

This infographic provides observations on the patenting activity which took place in the field of COVID-19 vaccines throughout the pandemic, from January 2020 to September 2022.

Top vaccine patent applicants

The top four vaccine patent applicants were universities and research organizations, with the first of the companies rounding out the top five applicants.

Companies
- Tsinghua University
- The Gamaleya National Center of Epidemiology and Microbiology
- Liaoning Chengda Biotechnology
- ModernaTX
- Tübingen Medical School

Universities and research organizations
- Sun Yat-Sen University
- Institut Pasteur
- Institute of Medical Biology, Chinese Academy of Medical Sciences
- Institut Pasteur
- Institute of Microbiology, Chinese Academy of Sciences

Applicant locations

Most patent applications were filed by patent applicants in China and the United States.

Top applicant locations in different COVID-19 vaccine platforms

While China and US-based applicants filed patent applications across different vaccine platforms, including adjuvants and technologies related to nanoparticles, applicants from Germany, the Republic of Korea, the United Kingdom, Japan and others focused on protein subunit, viral vector and RNA vaccine platforms. Russian Federation applicants filed mainly in the field of viral vector vaccines.

Distribution of patent applications across vaccine Platforms

48% of the vaccine patent dataset related to protein subunit vaccines, followed by patent filings related to viral vector vaccines), which accounted for 22% of the vaccine patent dataset.

- Protein subunit: 626
- Inactivated virus: 115
- Virus like particle: 68
- Live attenuated virus: 39
- Viral vector: 284
- RNA vaccine: 145
- DNA vaccine: 96
- Antigen presenting cell: 40
- Others: 104