

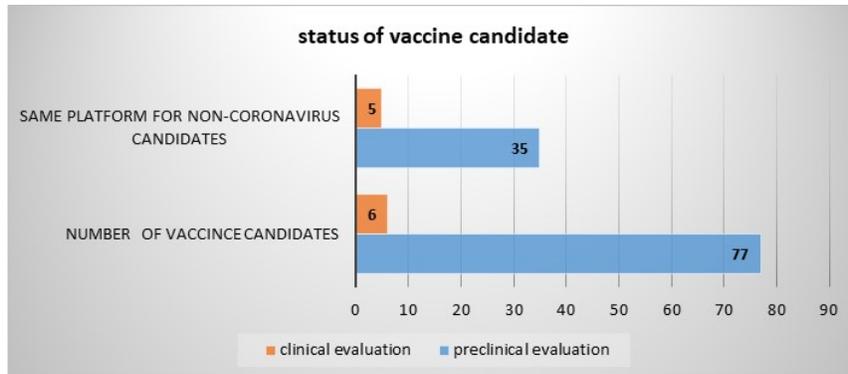
# COVID-19 translational trends: initiatives, risks, challenges and hope

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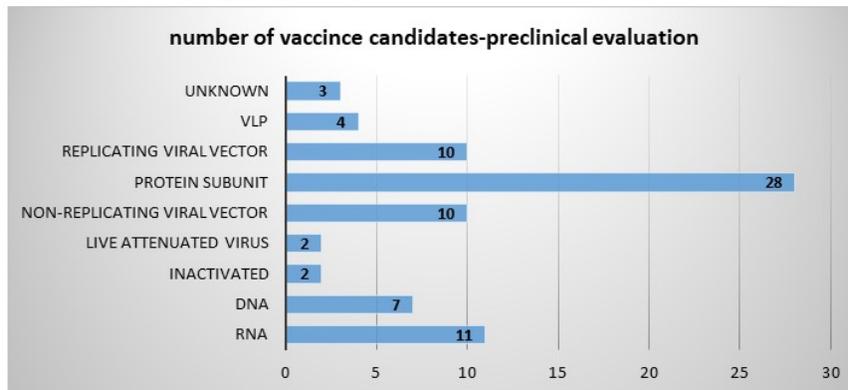
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## Abstract and findings

Science, market and government being the key actors in medical research and innovation has to face the challenge in several ways. Even if the government invests money for scientific research, it is not certain if the science will be able to deliver, however, taking risks is crucial to open new knowledge of frontiers. Conceptualization of public policy for innovation involves public-private partnership. Diffusion of knowledge into the society depends on the coordinating and regulating the interactions between the different actors as case of the COVID-19 challenge the world is facing today. The race to develop the therapeutics for COVID-19 has begun with lots of hopes and challenges and risks. Emergency efforts are underway to find optimum medical products to fight COVID-19 pandemic. However, drug quality is vulnerable to fear, desperation, and disinformation. The paper highlights the translation trends for COVID-19-the key actors, roles, challenges and risks for diffusion of scientific knowledge into the clinical practice.



**Figure 1.** Candidate vaccines in clinical and preclinical evaluation: 77 vaccine candidates are in preclinical evaluation and 6 vaccine candidates are in clinical evaluation (23rd April, 2020, WHO).



**Figure 2.** Platform types and number of candidate vaccines in preclinical evaluation (23rd April, 2020, WHO).

Figure 1 and 2 describe the status of the candidate vaccine drugs in preclinical and clinical evaluation (as on 23rd April, WHO). Total 77 vaccine candidates are in preclinical evaluation stage and 6 vaccine candidates in clinical evaluation stage, among which 5 clinical evaluation candidates and 35 preclinical evaluation candidates are using the same platform as of non-coronavirus candidates (Figure1). This gives hopes for the faster development of vaccine candidates which generally takes about 8-10 years for a vaccine to develop.

Unlike the case of earlier of pandemic for example, the SARS and Zika epidemics ended before vaccine development was complete, the development of vaccine should continue even if the pandemic ends. A team with a scientific advisory mechanism of the highest quality is very critical. A comprehensive governance framework on the outbreak so as to fight the challenge is needed.

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