With the COVID-19 pandemic, immunoengineers have been in the spotlight. What are some advantages/disadvantages to this additional attention to scientists and engineers that are otherwise unnoticed?

COVID19 had major impacts on economies, people’s life and research in general. Many ongoing projects were stopped, and researchers pivoted their effort to questions related to the COVID pandemic. Scientists were pressured to make rapid progress which resulted to an explosion of new publications; with an impressive increase numbers of papers uploaded to BioRxiv ; some of them not properly reviewed [1].

COVID 19 disrupted the immunology research community but provided opportunities for collaboration to an unprecedented scale with cross-continent team exchanges. But travel restrictions also, impacted the scientific research at large, caused a reallocation of research funding, a reduction in hiring, and conference events [1].

Another impact of CVOID-19 is that some researchers who were not working on COVID, felt the isolation enforced by the lockdown, leading to a decline in productivity, with a decrease in new projects, new submissions, and new publications [2].

[1] L. Harper *et al.*, “The impact of COVID-19 on research,” *J. Pediatr. Urol.*, vol. 16, no. 5, pp. 715–716, 2020, doi: 10.1016/j.jpurol.2020.07.002

[2] J. Gao, Y. Yin, K. R. Myers, K. R. Lakhani, and D. Wang, “Potentially long-lasting effects of the pandemic on scientists,” *Nat. Commun.*, vol. 12, no. 1, p. 6188, 2021, doi: 10.1038/s41467-021-26428-z

While for the public opinion, it may seem that biotechnology, and bioengineering have recently gathered an increase attention, it is important to note that these fields have been receiving substantial funding for quite some time. For example, the excitement around CRISPR discoveries and the injection of fresh funding into related startups predates COVID 19. Even before the pandemic, significant progress has been made in immunotherapy; for example with the development of breast cancer therapy Herceptin and in fact, Dr Allison and Honso received the Nobel prize in 2018 for their work in “cancer therapy by inhibition of negative immune regulation ”.

Regarding your comment about expediting COVID-19 therapy validation, considering that typical timeline for therapy approval by the FDA can be up to 10 years (source: <https://coronavirus.jhu.edu/vaccines/timeline#:~:text=Typical%20Timeline,vaccine%20doses%20for%20widespread%20distribution>.), researchers faced a unique challenge e during the pandemic and what could have been done to enhance the validation process (list of all the vaccines: https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization#covid19euas)?